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Based on Combined GASP  
and Ozonesonde Data**

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National Aeronautics  
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**Scientific and Technical  
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## **Preface**

This report contains data obtained both by the Global Atmospheric Sampling Program (GASP) and from existing ozonesonde measurements. Many of these were taken after the publication of Federal Aviation Administration (FAA) Report FAA-EQ-78-03, "Guidelines for Flight Planning During Periods of High Ozone Occurrence," in January 1978.

The FAA has published Advisory Circular 120-38, "Transport Category Airplanes Cabin Ozone Concentrations," dated October 10, 1980. (Copies of this advisory circular can be obtained free of charge from the United States Department of Transportation, Publications Section M-443.1, Washington, D.C. 20590.) In this advisory circular, examples are presented for acceptable (but not the only) means for an air carrier to demonstrate compliance with the maximum permissible cabin ozone concentrations established by Section 121.578 of the Federal Aviation Regulations (FAR). In paragraph 6 and Appendix 2 of the advisory circular, it is stated that any ozone data set used to show compliance must have, as a minimum, a resolution on a monthly basis of 2000 feet in altitude and 5 degrees in latitude.

The tabulations in this report have not been statistically compared with those published in FAA Report FAA-EQ-78-03 to determine the spatial and temporal differences, if any, between the tabulations. Hence, use of the data in this report to show compliance with Section 121.578 of the FAR is not acceptable.

Since these data sets have been compiled, however, the FAA would like to disseminate them at this time as information to the scientific community and other interested groups.

John E. Wesler  
Director of Environment and Energy  
Federal Aviation Administration



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## Contents

	Page
Summary.....	1
Introduction.....	1
GASP Data .....	2
Ozonesonde Data .....	3
GASP-Ozonesonde Data Comparison.....	3
Case Study Comparisons .....	3
Statistics Comparison .....	8
Results.....	10
Concluding Remarks .....	14
References .....	14
Appendix A	
Ambient Ozone Climatological Tabulations in 5° Latitude by 45° Longitude by 2000-ft Altitude Intervals by Month.....	23
Appendix B	
Ambient Ozone Climatological Tabulations in 10° Latitude by 45° Longitude by 2000-ft Altitude Intervals by Season .....	275

## Summary

A climatology of ozone for altitudes from FL190 to FL590 (19 000 to 59 000 feet) is presented. Climatological tables are given in two appendixes: one with 5° latitude resolution on a monthly basis, and one with 10° latitude resolution on a seasonal basis. Data were taken from 11 472 balloon-borne ozonesondes launched at 60 stations from 1963 to 1980 and from Global Atmospheric Sampling Program measurements made on 4417 commercial airliner flights from 1975 to 1979. Case study and statistical comparisons of results from these two data sets showed that they are compatible and can be combined. The GASP data used were limited to statistically independent observations.

Several examples of analyses that can be made by using the tabulated data are given and discussed. These examples illustrate the principal components of the variability of ozone, namely that, at airliner cruise altitudes, ambient ozone concentrations generally increase with both increasing altitude and latitude and are highest in the spring. The ambient ozone climatology presented in this report will help identify regions where high ambient ozone is likely and can be used to estimate the statistical probability that a given level would be encountered.

## Introduction

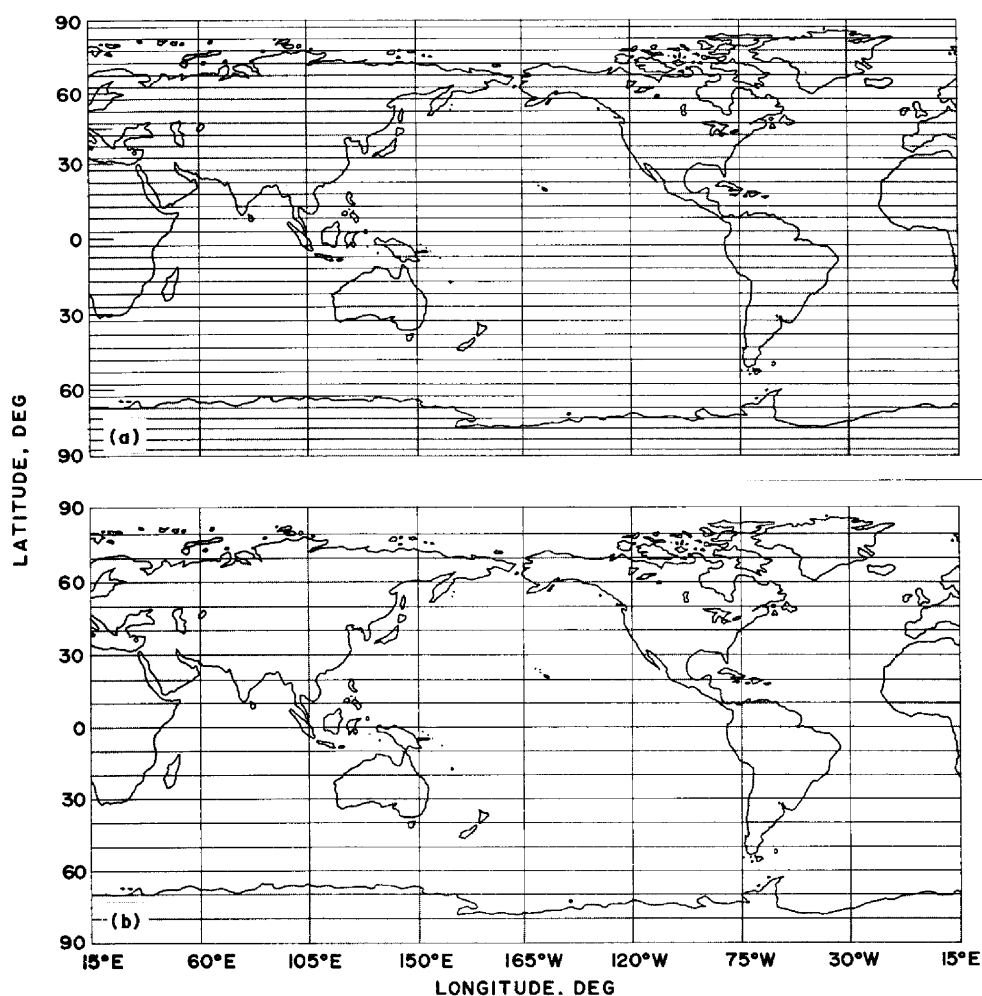
Next to water vapor, ozone is perhaps the most widely publicized trace gas in the atmosphere. Ozone in the very high atmosphere provides a life-protecting shield against harmful ultraviolet radiation, but ozone can also be a poison when encountered directly and breathed in sufficiently large doses. As noted in reference 1, aircraft passengers could be exposed to potentially harmful levels of ozone unless precautions are taken either to avoid regions of high ambient (outside air) ozone levels or to destroy the ozone in the cabin air. This report presents a climatology of ozone at airliner cruise altitudes (FL190 to FL590; 19 000 to 59 000 ft) to help define regions where high ambient ozone levels are likely.

Two separate data sets were used to produce the ambient ozone climatology presented in this report. The

first set consists of measurements taken at cruise altitudes by four Boeing 747 (B747) airliners in routine commercial service as part of the NASA Global Atmospheric Sampling Program (GASP); references 2 and 3. The other set consists of balloon-borne ozonesonde measurements taken at 60 stations over the globe. The GASP and ozonesonde data are discussed in the following two sections. Climatological results from earlier portions of these two data sets are presented separately in references 4 to 8, and they were used separately to study ozone levels during the winter of 1976-77 (ref. 9). They were not previously merged to provide a single comprehensive data set because of concern that the measurement techniques might be incompatible even though early spot comparisons (refs. 10 and 11) were favorable. The results from these two data sets have now been compared, both on a case study basis and on an overall statistical basis, and these comparisons are presented. It was concluded that the two sets can be combined to provide the most complete ozone climatology currently available for present and expected airline cruise altitudes.

It is now possible to obtain ozone distributions in the lower stratosphere on an almost worldwide basis from satellite-borne instruments operating in a limb-sounding mode. For example, reference 12 compares ozone concentrations inferred from the LIMS instrument aboard the NIMBUS 7 satellite with those obtained from ozonesondes. To date, the agreement is of the order of 20 percent. After further validation of the remote-sensing technique, it should be possible to use the satellite data to derive a truly global ozone climatology.

For some applications, it is desirable to examine the data at the finest space and time resolution possible; for other applications it is necessary to use coarser resolution in order to obtain more stable statistics. To accommodate each of these needs, the climatology is presented on a monthly basis with 5° latitude resolution in appendix A and on a seasonal basis with 10° latitude resolution in appendix B. To help orient the reader, the grids used in preparing the data shown in the appendixes are presented in figure 1 with geographic background. In this report the appendixes are described and examples of ozone climatological presentations derived from them are discussed.



(a) Appendix A grid. (b) Appendix B grid.  
Figure 1. – Example of data grid with continental background.

## GASP Data

The data acquisition phase of the NASA Global Atmospheric Sampling Program (GASP) ran from March 1975 to July 1979. During this period, up to four commercial Boeing 747 (B747) aircraft flew instrumentation to sample and record atmospheric trace constituents (including ozone) and meteorological data (refs. 2 and 3). These aircraft (one from United Airlines, two from Pan American World Airways, and one from Qantas Airways of Australia) were in routine service along regularly scheduled routes and obtained over 160 000 ozone observations. The frequency of flights on routes on which ozone was measured is given in table I. There were 4417 GASP ozone flights on 234 separate routes. Most of these routes were in the United States (including Hawaii) or were from the United States to Europe or Japan. However, there also were several flights from the Northern to the Southern Hemisphere, within the Southern Hemisphere, and between cities along the southern rim of Asia and even some into

Africa. Case studies of some of the early data from GASP can be found in reference 13.

The GASP system was automated to record data at 5- or 10-minute intervals during flight above FL190 (19 000 ft; to be consistent with usual airline terminology altitudes are given as FL's herein). When turbulence was encountered, or on selected entire flights, data were recorded at 4-second intervals (ref. 14), but in this report these data were averaged over 1-minute intervals.

Ozone measurements were made by using ultraviolet absorption photometers specially modified to operate in the airborne environment. The instrument's range was from 0.003 to 20 ppmv (parts per million by volume), and its random error was 4 percent of reading or 0.003 ppmv, whichever was greater (ref. 15). In all, over 160 000 ozone observations were made during GASP. Time-series plots of the ambient (atmospheric) ozone for flights that also had cabin ozone data are given in references 16 and 17. Additional information on the GASP ozone measurement system can be found in references 7, 8, 14, 16, and 17.

At GASP airliner cruise altitudes, ozone levels are influenced by the large-scale weather systems (ref. 6). Thus, not all of the ozone observations on each flight provided independent information even though they were usually spaced at 5- to 10-minute (about 75- to 150-km) intervals. For climatological purposes it is important to use only independent observations so that the results are not biased by just a few days or incidents.

The distance between independent observations is twice the integral space scale (e.g., ref. 18), which was estimated to be 135 km in an earlier study (ref. 19) from the average spatial autocorrelation function of ozone from 111 selected flights. Along each GASP flight used herein, ozone data were considered to be independent within each grid box if they were separated by 270 km or more. This distance corresponds to nearly 20 minutes of flight time. The grid boxes for each month (or season) are 2000 feet in altitude by 45° longitude by either 5° or 10° latitude (appendixes A and B, respectively). About 40 percent of the total GASP ozone data were interpreted as independent and used in forming the tabulations.

The GASP data are available to the public on magnetic computer tape from the National Climatic Center, Federal Building, Asheville, North Carolina 28801. The tapes are identified as VL0001 to VL0031 and include all data from March 11, 1975, to July 12, 1979. Information on tape contents, dates of data, or formats can be found in reference 20 and references therein.

## Ozonesonde Data

Vertical profiles of ozone measured by balloon-borne ozonesondes from 1963 to April 1980 were obtained. A total of 11 472 profiles from 60 stations were collected, although periods of record and frequency of measurement varied greatly from station to station. Tabulations of these data in a format analogous to the GASP tabulations are presented in reference 5 along with a description of the data sources.

Most of the ozonesonde data were collected over North America, Western Europe, Australia, and Japan. Additional data came from Antarctica, India, Central and South America, and a few islands and ships. Table II presents the number of ozonesonde ascents and the period of record for each of the ozonesonde stations. With relatively few exceptions, ozonesondes tended to be launched at least a day apart. Each ascent is assumed to provide an independent ozone profile.

Several different types of ozonesonde instruments were used at the different stations, and each instrument had different error characteristics. For example, random errors associated with the Brewer-mast electrochemical sonde and the Komhyr electrochemical concentration cell sonde range from 4 to 8 percent of value (ref. 21). Other

sondes may have larger errors; for example, reference 22 points out that chemiluminescent cell sonde data are 50 percent too low in the troposphere. Because of the widely differing errors, no attempt was made in this study to correct the reported ozonesonde data.

## GASP-Ozonesonde Data Comparison

Ozonesondes are useful because they provide a vertical profile of the ozone distribution above a station at a given time. These data are, however, generally restricted to land areas. Most of the ozonesonde profiles have been obtained by ascents over North America, Western Europe, and Japan. The GASP data have the advantage of being collected over both continents and oceans and are concentrated along major commercial aircraft flight corridors. Their disadvantage, at least from the broad perspective, is that relatively few levels of the atmosphere are sampled. Because both of these data sets are quite large, it would be desirable to combine them in order to provide the most comprehensive compilation of ozone data possible. The feasibility of such a combination is addressed for the first time in this report.

Before the data were combined, measurements made by the two systems were compared to investigate the feasibility of the combination. This section presents two approaches to comparing these measurements: a case study comparison between individual GASP flights and ozonesonde profiles, and a comparison between the statistics of the gridded ozonesonde and GASP data.

### Case Study Comparisons

All GASP flights with ozone measurements and all ozonesonde flights were compared to find any that coincided in time and space. All GASP flights that came within 3° latitude and 6° longitude of an ozonesonde station within 6 hours of an ozonesonde launch were tagged. This resulted in the identification of 175 "proximity" ozonesonde soundings.

An attempt to relate the difference between the GASP ozone and ozonesonde measurements to the time or space separation was unsuccessful. The reason for this lack of success is that ozone in the lower stratosphere has a large amount of spatial structure. Synoptic circulations can change the local and regional ozone concentrations very quickly. Because of this problem, about three dozen individual case study comparisons were made in detail. The examples presented in figures 2 to 9 and discussed in the next few paragraphs have been chosen to illustrate typical comparisons between the GASP and ozonesonde measurements.

The left side of each figure depicts the aircraft position and height and the ozone concentration measured along the GASP flight as a function of time. The location or

locations of the relevant ozonesonde station or stations are represented by a circle in the position portion of the figure. The right side of each figure presents a portion of the "proximity" ozonesonde profile. The aircraft height or heights are represented by a horizontal line in the right diagram. A line enclosed by parentheses representing the range of ozone values measured by the GASP aircraft and an "X" indicating a subjective "expected" value are also included at this level or these levels.

Figures 2 and 3 present two cases where the airplane was flying in the troposphere. These figures show variation in the GASP-measured ozone even though the concentrations are small. Figure 2 shows that there are differences in the ozone profiles measured by two sondes launched about 32 km and 1 hour apart. A characteristic that was frequently observed, and is apparent in figure 3, is that for low ozone concentrations ( $<0.05$  ppmv) the ozonesonde typically measured lower values than the GASP instrumentation.<sup>1</sup>

Figure 4 shows an appreciable change in ozone concentration along a level flightpath. The magnitude of the ozone concentration indicates that the aircraft was flying in the lower stratosphere but was near the

tropopause at the end of the flight segment. There is excellent correspondence between the time, location, and ozone concentration at the comparison point.

Figures 5 and 6 show examples with large ozone concentrations, substantial horizontal and vertical structure, and (particularly in fig. 6) large vertical ozone gradients. Each of these cases shows excellent agreement between the GASP and sonde measurements.

Figures 7 and 8 illustrate cases where there are very large amounts of horizontal structure even though the vertical profiles show relatively constant gradients of ozone with heights. Figure 8 shows large horizontal ozone structure at both flight levels.

Figure 9 is included to show the very large differences in ozone concentration that can be found over small space and time separations. Measurements of ozone in the lower stratosphere made by pairs of ozonesondes launched from both Cold Lake and Edmonton, Alberta, Canada, show little relation to one another. The differences observed in the ozonesonde measurements are reflected by large horizontal gradients in the GASP measurements made along a single flight level.

These examples have been presented to illustrate typical case comparisons between the GASP ozone measurements and proximate ozonesonde soundings. The empirical information that they provide shows good evidence that the measurements made with the two systems are consistent and complement each other. These

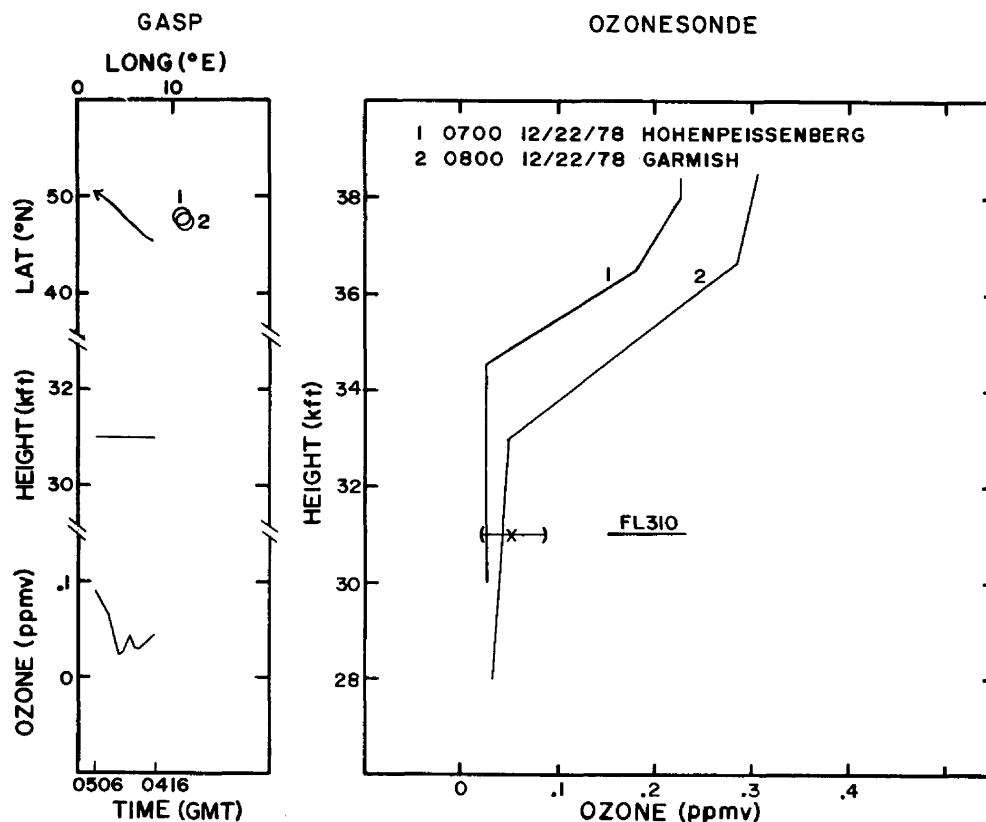


Figure 2. — GASP and ozonesonde proximity measurement comparison over Germany, December 22, 1978.

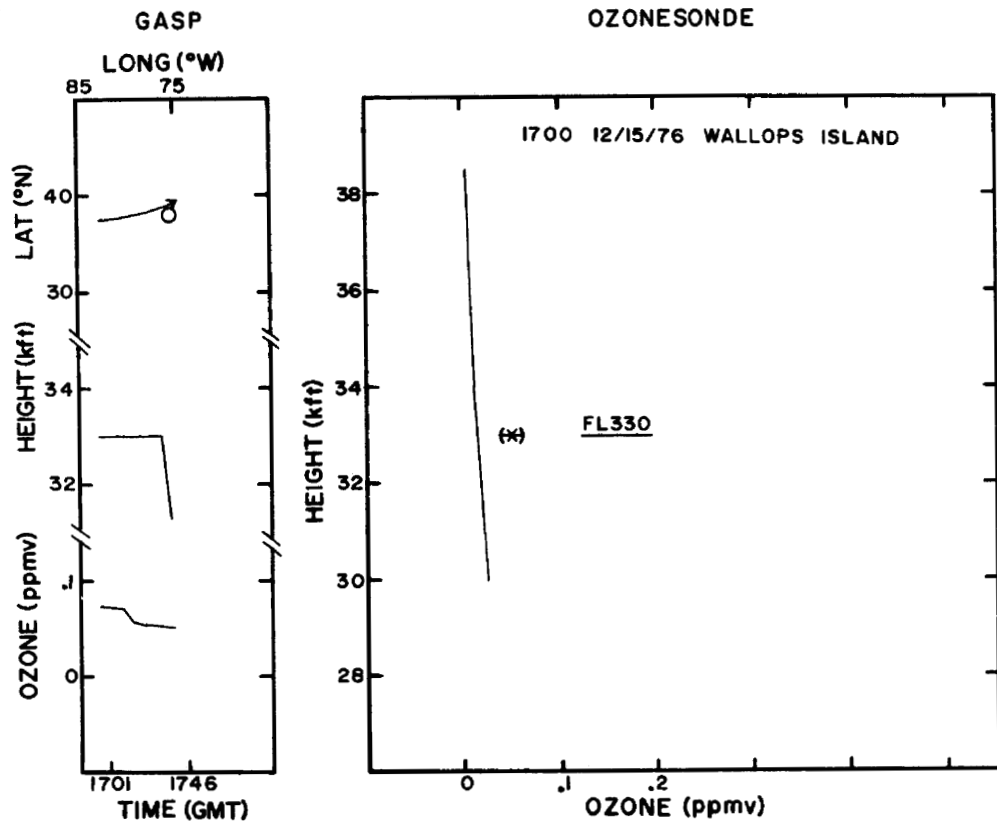


Figure 3. - GASP and ozonesonde proximity measurement comparison over eastern United States, December 15, 1979

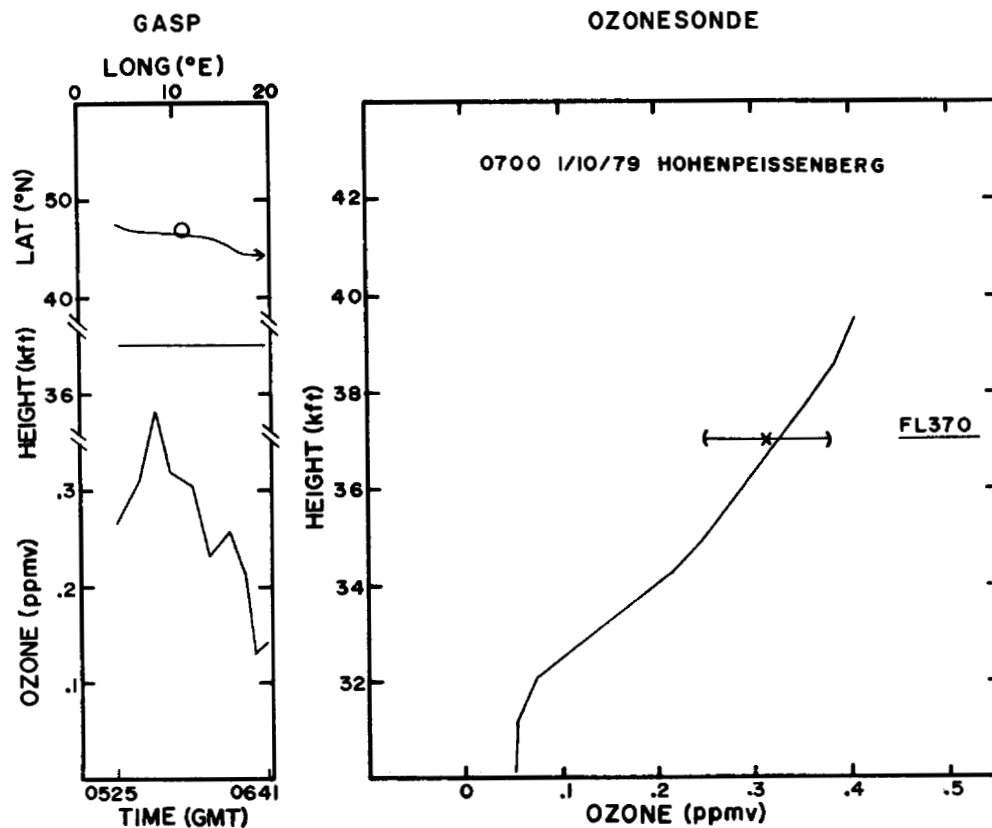


Figure 4. - GASP and ozonesonde proximity measurement comparison over Germany, January 10, 1979.

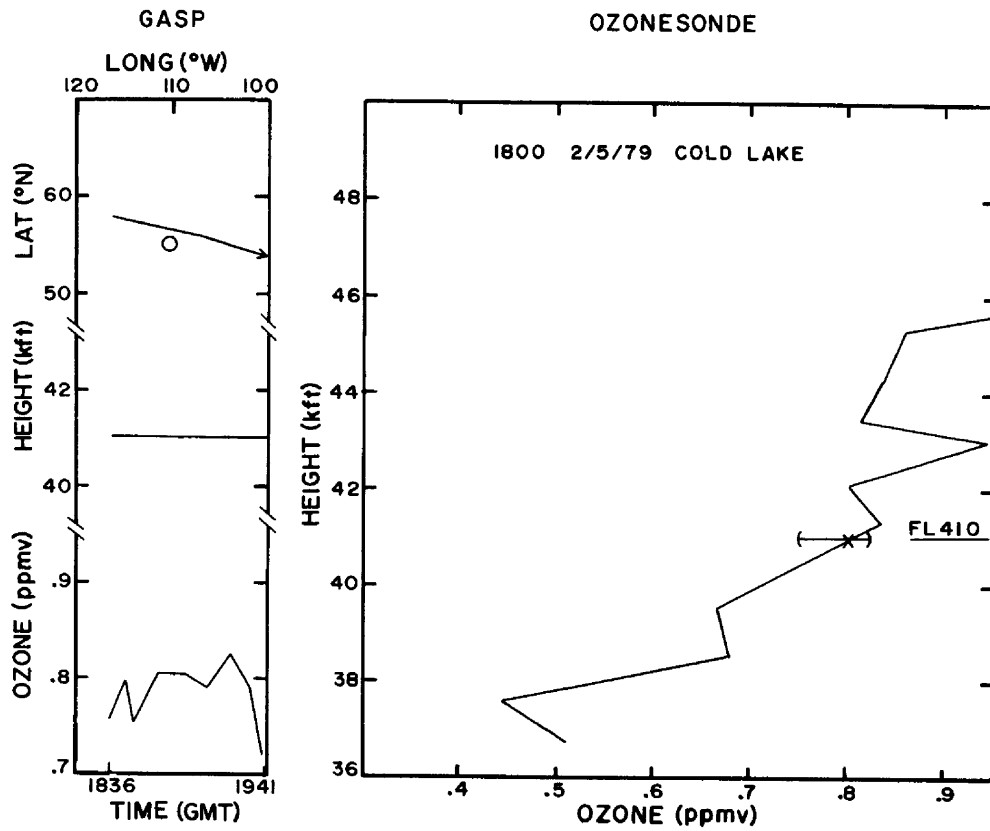


Figure 5. – GASP and ozonesonde proximity measurement comparison over western Canada, February 5, 1979.

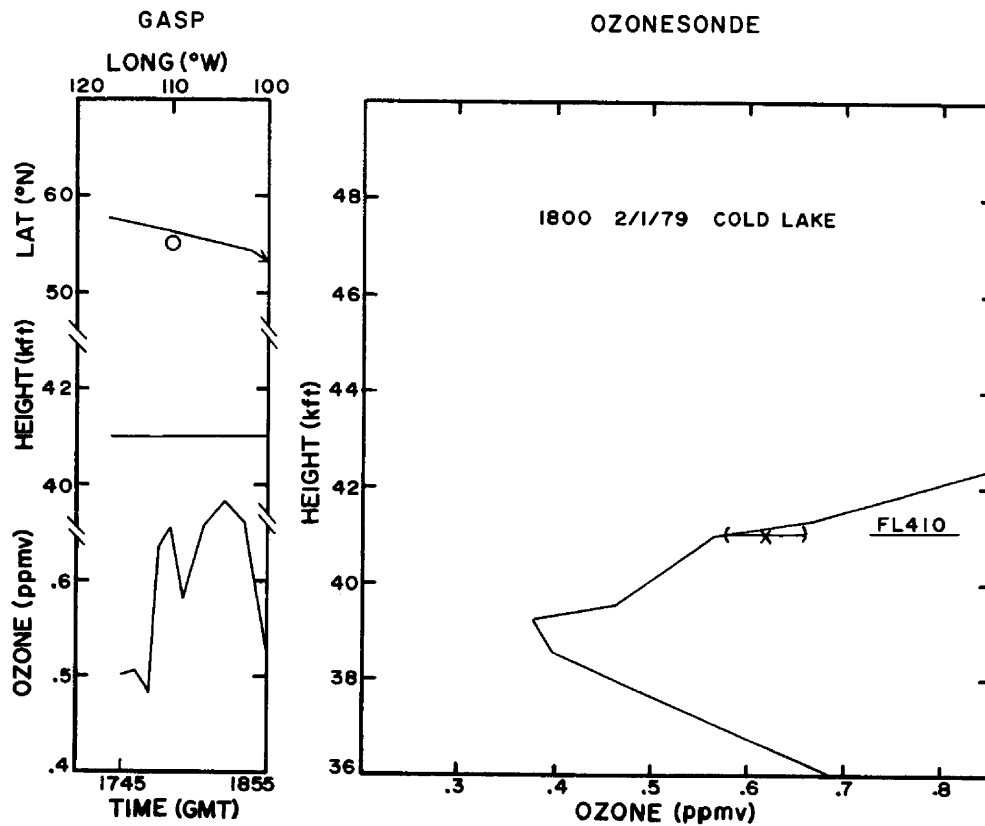


Figure 6. – GASP and ozonesonde proximity measurement comparison over western Canada, February 1, 1979.



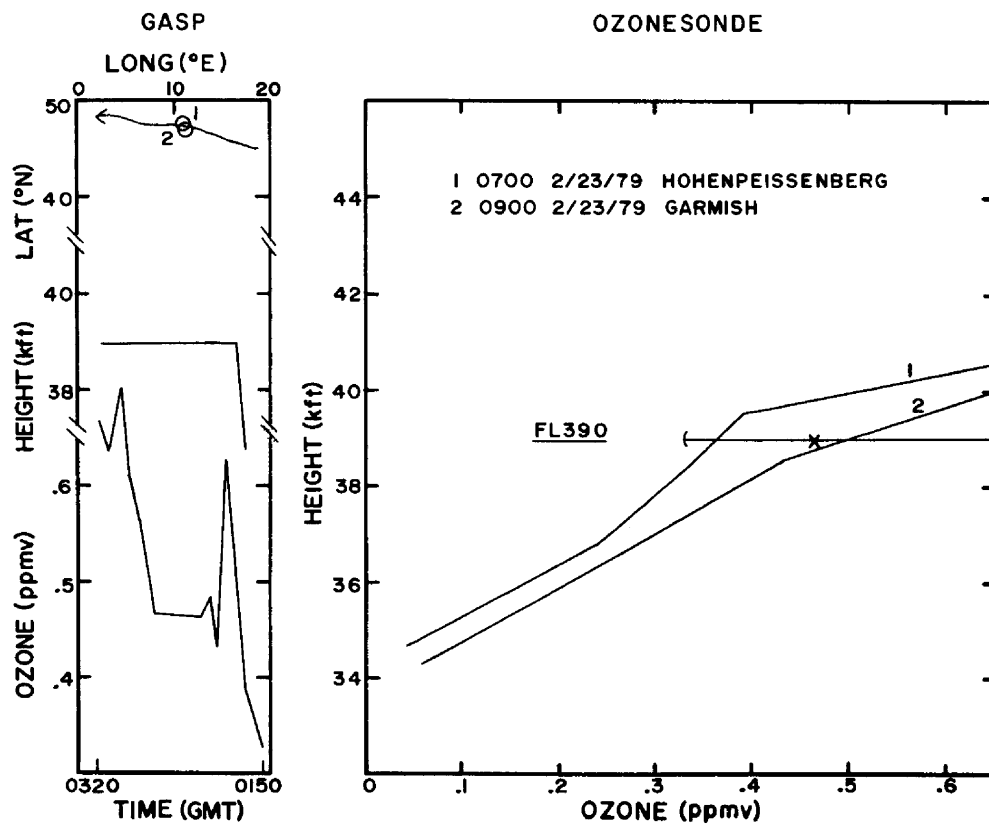


Figure 7. -GASP and ozonesonde proximity measurement comparison over Germany, February 23, 1979.

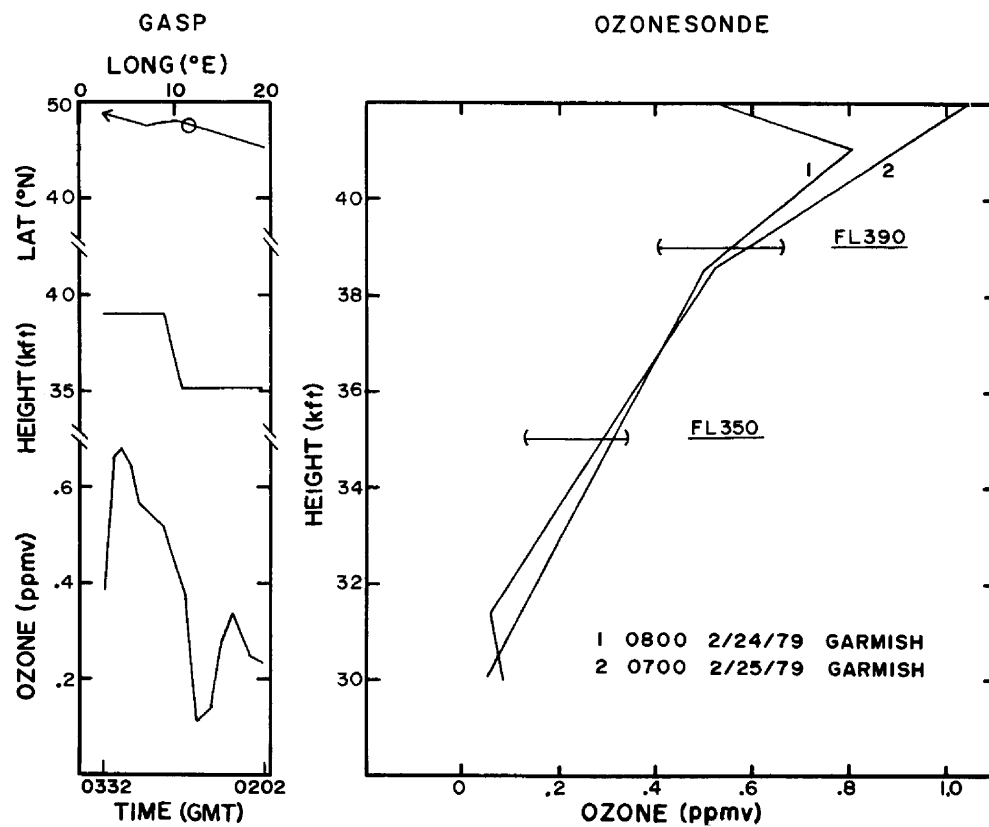


Figure 8. -GASP and ozonesonde proximity measurement comparison over Germany, February 24, 1979.

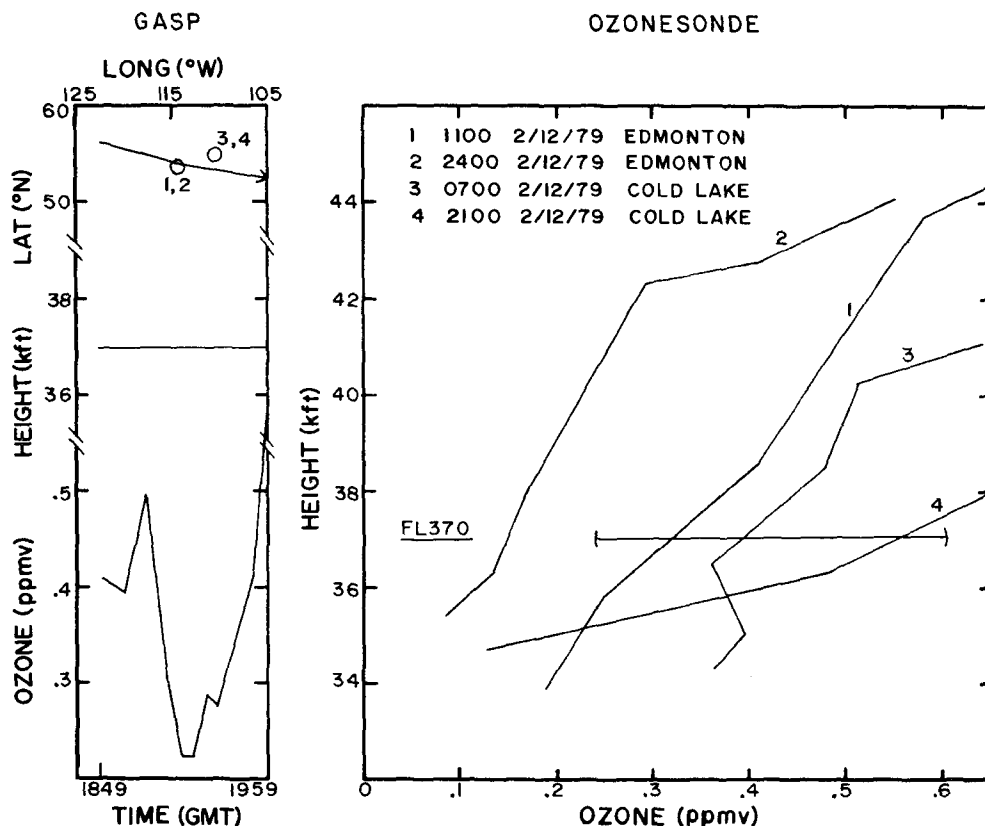


Figure 9. - GASP and ozonesonde proximity measurement comparison over western Canada, February 12, 1979.

case study comparisons show no evidence that the two measurement systems are incompatible.

### Statistics Comparison

The statistics between the gridded GASP and ozonesonde data were also compared. These expand on other comparisons made in reference 9. Figure 10 presents the mean ozone profiles from both ozonesondes and GASP for 15° E to 30° W longitudes and 40° N to 50° N latitudes in spring (March, April, May). The ozonesonde profile is composed of 695 soundings (1963-80); the GASP profile is composed of 8 to 54 data points (1975-79), depending on the level. These profiles agree very well.

Figures 11(a) and (b) present the mean winter ozone profiles for 15° E to 30° W longitudes and 40° N to 50° N and 50° N to 60° N latitudes, respectively. Figure 11(a) shows that the mean ozone as measured by GASP has a small but relatively constant high-side bias of about 0.02 ppmv, but the profiles in figure 11(b) agree with each other very well. The standard deviations at each level are much larger than the differences between the means.

Figures 12(a) and (b) compare mean winter ozone profiles for 75° W to 120° W longitudes and 30° N to 40° N and 40° N to 50° N latitudes, respectively. Figure 13 compares mean spring ozone profiles for these latitudes and longitudes. The comparisons are good.

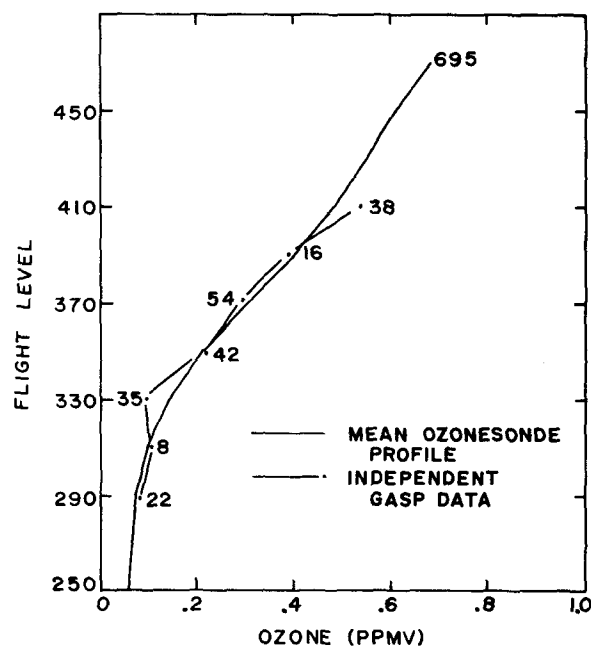
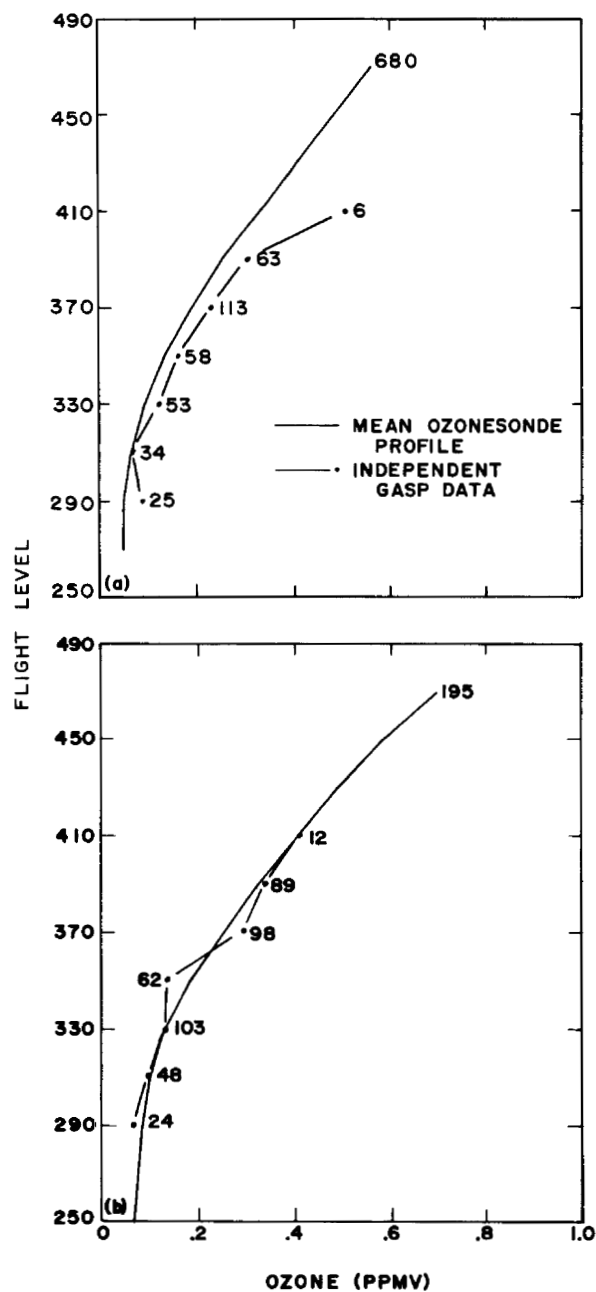
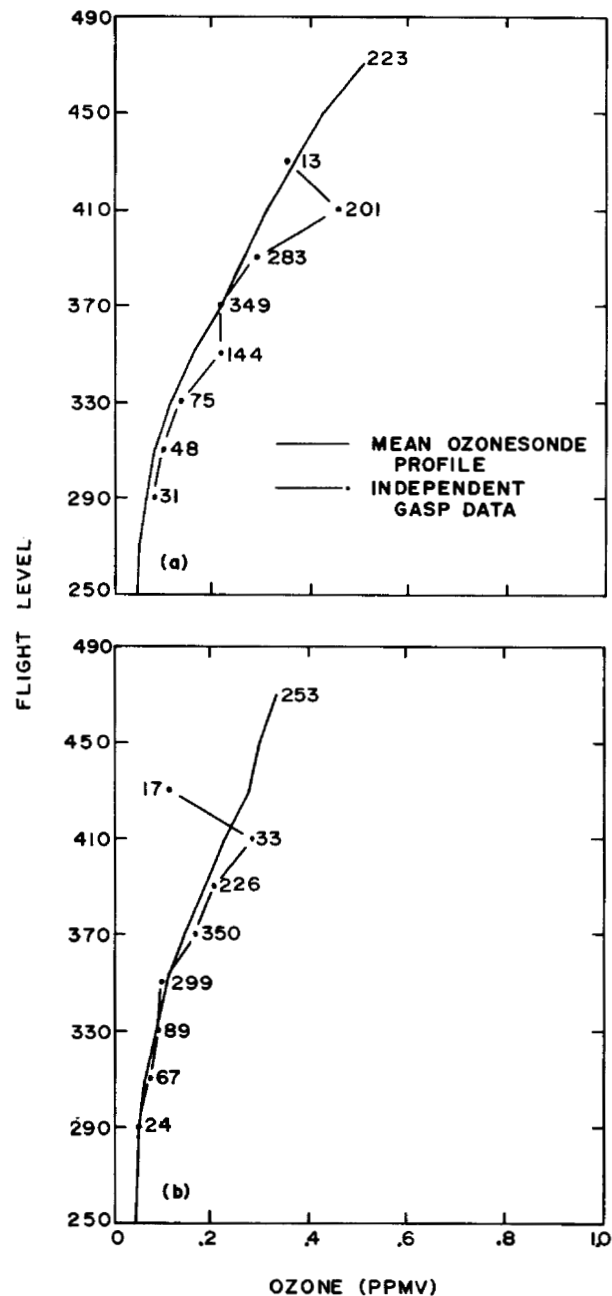


Figure 10. - Comparison between mean profile computed from ozonesondes only and independent GASP only data from spring, 40° N to 50° N latitude and 15° E to 30° W longitude. (The number of GASP observations is noted at each level, and the number of ozonesonde observations is noted at the top of the profile.)



(a) 15° E to 30° W and 40° N to 50° N.  
(b) 15° E to 30° W and 50° N to 60° N.

Figure 11. - Comparison between mean profile computed from ozone-sondes only and independent GASP only data from winter. (The number of GASP observations is noted at each level, and the number of ozone-sonde observations is noted at the top of the profile.)



(a) 75° W to 120° W and 30° N to 40° N.  
(b) 75° W to 120° W and 40° N to 50° N.

Figure 12. - Comparison between mean profile computed from ozone-sondes only and independent GASP only data from winter. (The number of GASP observations is noted at each level, and the number of ozone-sonde observations is noted at the top of the profile.)

No specific statistical test such as difference of means was performed. The reason for this is that neither data set constitutes a purely random sample of observations. The ozone-sonde data suffer from a deficiency in uniform time sampling. Many of the stations gathered data for only a short time so that year-to-year variation is not included. Furthermore, the data presented in this report are

gridded, and the spatial distribution of the stations within each of the grid boxes is not uniform. If the station or stations are near one edge of the box, the available ozone estimate may not be representative of the box as a whole because, at any given height, there is definitely a climatological gradient of ozone with respect to latitude. The GASP data also were not truly randomly sampled.

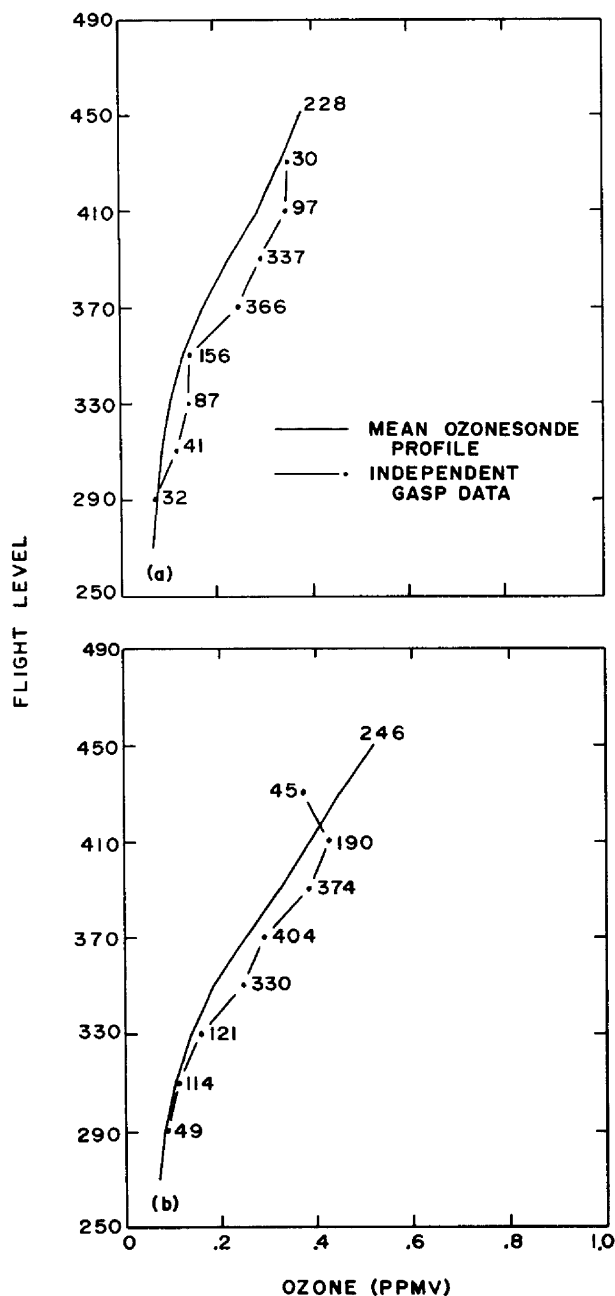


Figure 13. – Comparison between mean profile computed from ozonesondes only and independent GASP only data from spring. (The number of GASP observations is noted at each level, and the number of ozonesonde observations is noted at the top of the profile.)

Flightpaths and heights were chosen on the basis of synoptic (wind field) pattern. Because the ozone field is also related to the synoptic pattern, biases may be present.

In spite of these facts, however, the comparisons presented in this section strongly suggest that measure-

ments made with the two systems are compatible. The only difference consistently observed was at very low ozone levels, less than 0.05 ppmv, where the GASP instrument recorded somewhat higher concentrations than the ozonesonde (although part of this difference may be related to the previously mentioned low-side bias of some sondes). Thus, it is believed to be reasonable to combine the ozonesonde data and the GASP ozone data into a single comprehensive ozone summary.

## Results

Climatological tables of ozone based on the ozonesonde and GASP data combined as described above are presented in appendixes A and B. Appendix A gives the results by month with 5° latitude resolution; appendix B gives the seasonal results with 10° latitude resolution. Both appendixes present results from FL190 to FL590 at 2000-foot intervals and use 40° longitude resolution. The tabulated entries in the appendixes are the mean ozone concentration (ppmv), standard deviation, and number of observations in each grid box. Also given are the 50th, 84th, and 98th percentile values of the empirical probability function. The 50th percentile value is called the median; and 84 percent of the observations in a grid box are less than the 84th percentile values. Alternatively, 16 percent of the observations are greater than the 84th percentile values. The rightmost longitude box, labeled "MEAN," gives the results for all longitudes combined in each latitude belt.

Figure 14 presents the distribution of observations of the combined data set by latitude. Most of the data

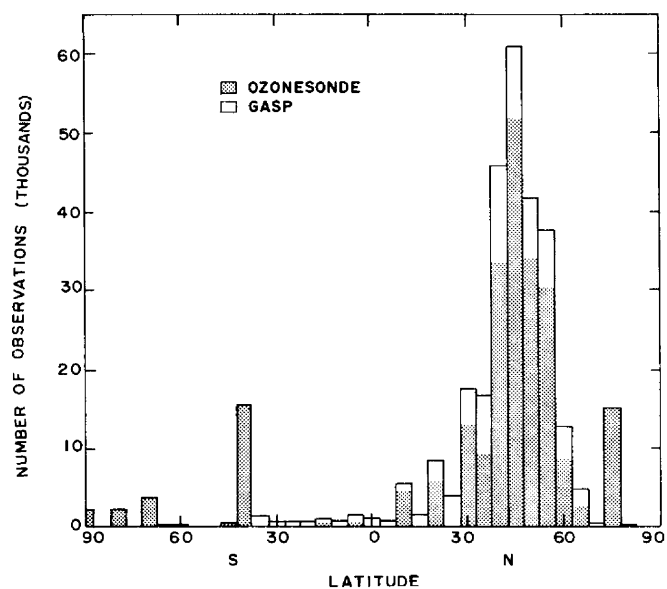


Figure 14. – Distribution of combined ozonesonde and GASP data with respect to latitude.

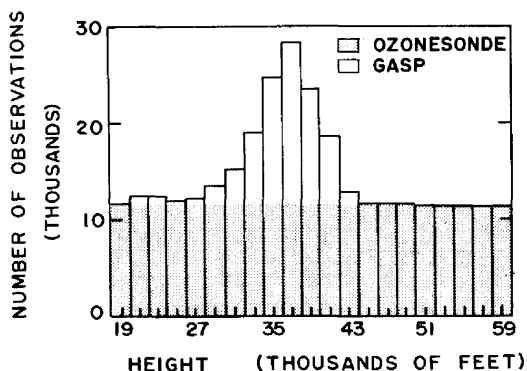


Figure 15. — Distribution of combined ozonesonde and GASP data with respect to height.

observations are from 30° N to 60° N. Figure 15 shows the distribution of the data by altitude. The shaded area below about 11 500 observations in figure 15 represents the contribution from the ozonesonde data, and the area above this line represents the addition of the GASP observations.

To help familiarize the reader with the information content and a few possible uses of the appendixes, examples of analyses based on these results are given in figures 16 to 24. The solid curves in figure 16 compare the cumulative frequency distribution (cfd) for FL350, 370, and 390 during March at 40° N and 75° W to 120° W, based on the three points given in appendix A (50, 84, and 98 percent) and the zero point. The dashed curves show the results based on a fine-resolution (14-point) cfd analysis. Note that the ordinate refers to percentage of

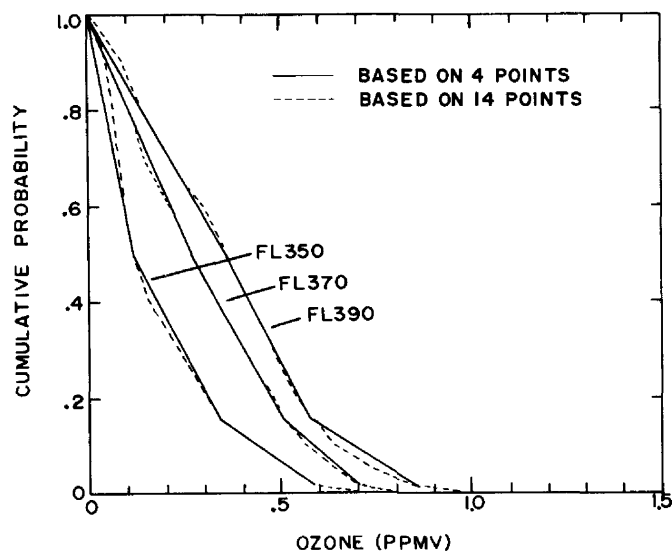


Figure 16. — Relative accuracy of cumulative frequency distribution of ambient ozone concentrations greater than indicated values. (Flight levels 350, 370, and 390 are presented from March data at 40° N and 75° W to 120° W.)

data greater than the value on the abscissa. This typical example illustrates that the three points tabulated in the appendixes are usually adequate to describe the entire cfd. Similar presentations have been made in references 5, 7, 9, and 22.

Of the three independent coordinates in the tables (month, flight level, and latitude), any two can be fixed during comparison studies. Figure 17 contrasts the cfd's for several flight levels at 45° N (all longitudes) during months with relatively large (March) and small (September) ozone levels, respectively. During both months there is a steady increase of ozone at any fixed probability with increasing flight level. Also note the change between months (e.g., at FL370 the median ozone level is about 0.3 ppmv during March, but during September it is less than 0.1 ppmv).

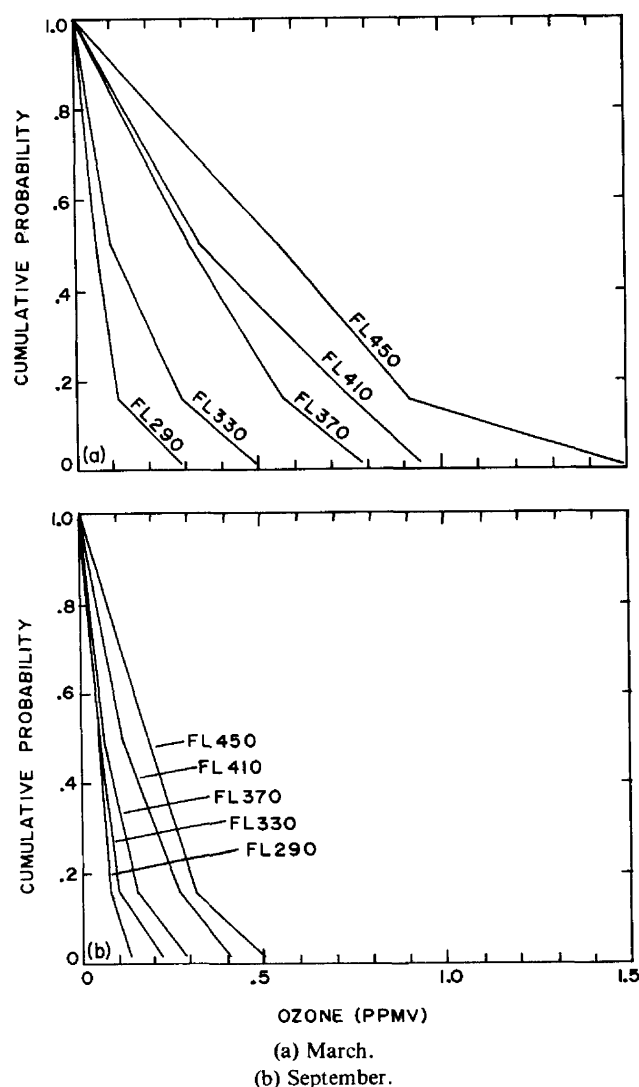


Figure 17. — Probability of ambient ozone concentrations greater than indicated values for FL290 to FL450 at 45° N.

As a second illustration, figure 18 contrasts the cfd's for several latitudes at FL390, again during March and September, respectively. During both months the ozone level corresponding to a given cumulative probability increases with increasing latitude, with latitudinal gradients generally larger in March than in September.

Another method of presentation is to choose a percentile value and then contour the ozone amounts as functions of latitude, altitude, or month. For example, figures 19(a) and (b) show the variation of ozone during March as a function of latitude and flight level, for the 50th and 84th percentile values, respectively. Both figures clearly illustrate the tendency for ozone to increase upward and northward, at least to 60° N. In this and subsequent figures the contours are drawn to represent the data as tabulated in appendixes A and B.

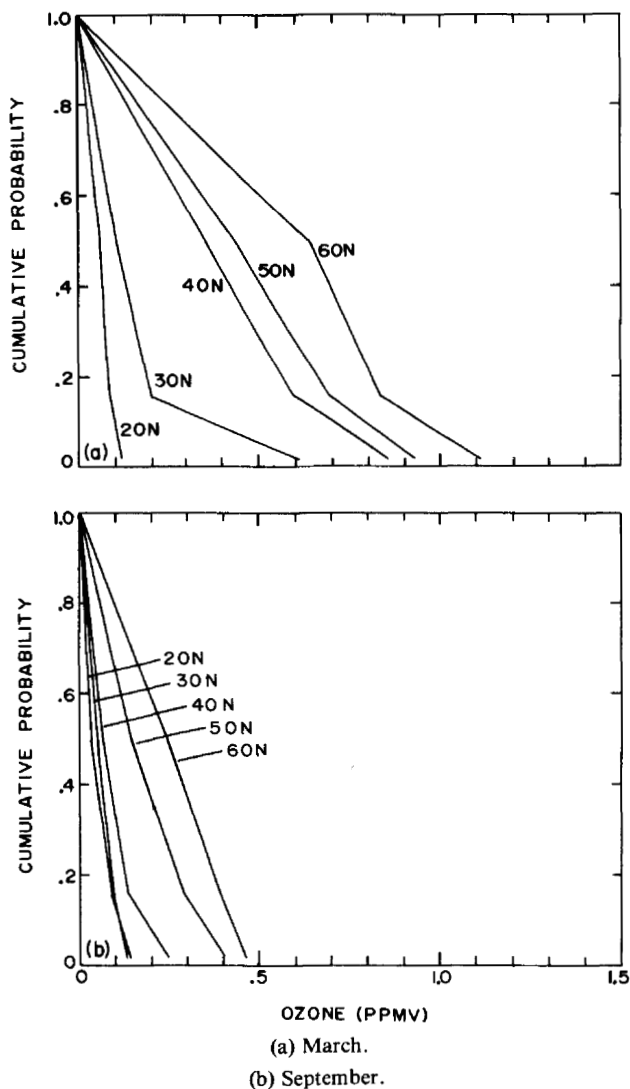


Figure 18.—Probability of ambient ozone concentrations greater than indicated values for 20° N to 60° N at FL390.

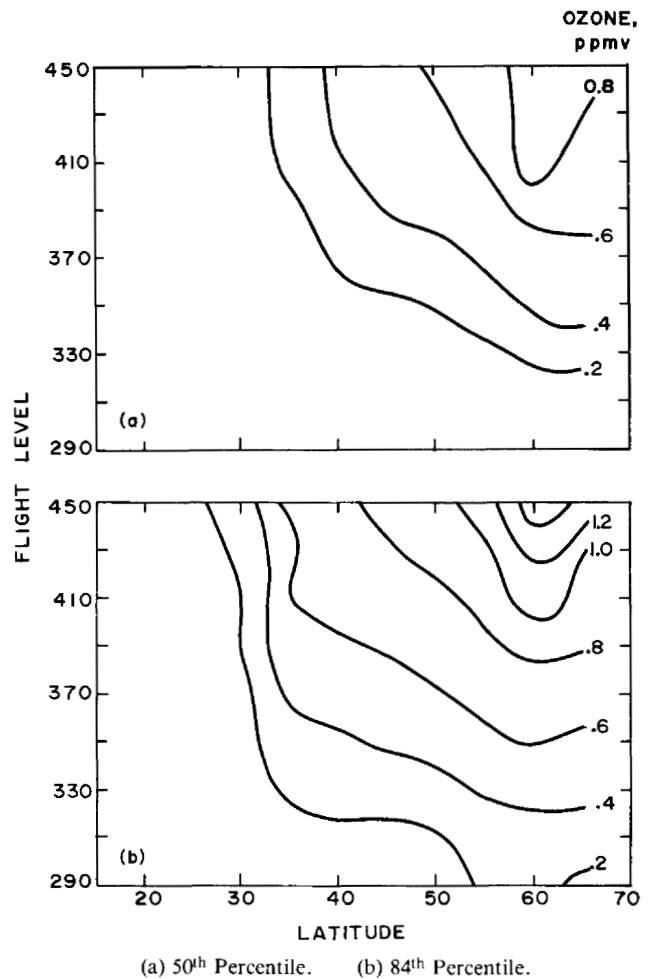
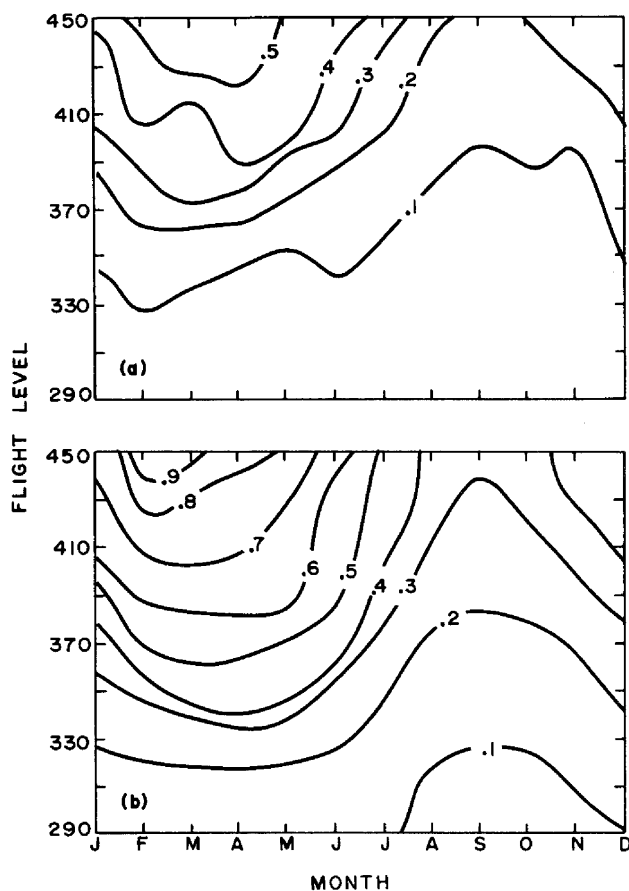


Figure 19. — Probability of ozone concentrations greater than indicated values from March data as function of flight level and latitude.

In figure 20 the latitude is fixed at 45° N and the variation of ozone with month and flight level is illustrated. Results from this and the previous figure for both the 50th and 84th percentile values show that ozone concentration is largest at high latitudes during spring months.

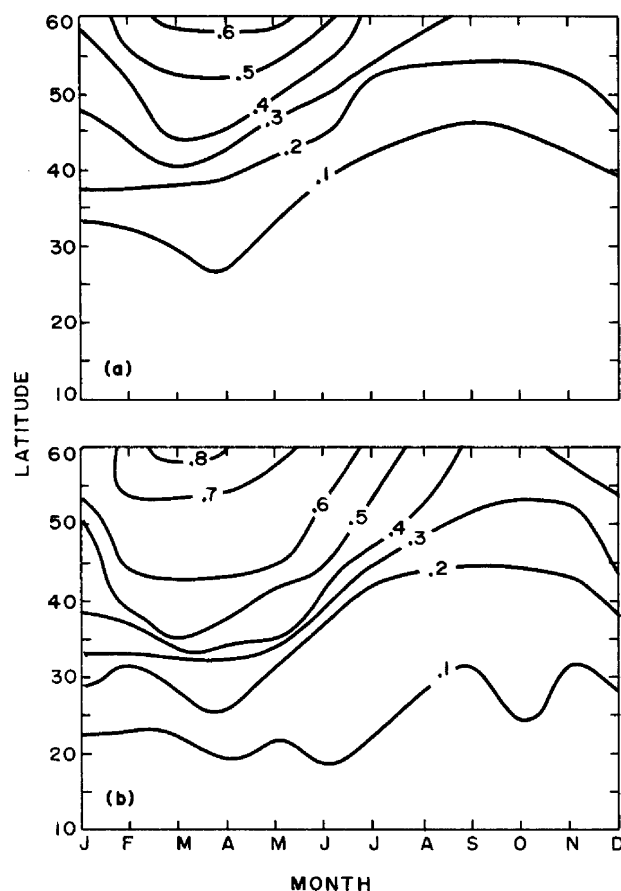
Ozone variations using the third set of coordinates are illustrated in figure 21. These charts show ozone as a function of latitude and month at FL390. Largest ozone levels are again found at high latitudes during spring months.

Finally it is of interest to consider where a given ozone level is found. As an example of this type of analysis, figure 22 shows the altitude at which the 84th percentile values of ozone equal 0.6 ppmv, as a function of latitude and month. The lowest altitude is at high latitudes during spring months, and the highest altitude is at 30° N during September. A chart similar to figure 22, but based on limited data, is given in reference 1.



(a) 50<sup>th</sup> Percentile. (b) 84<sup>th</sup> Percentile.

Figure 20. —Probability of ozone concentrations (ppmv) greater than indicated values for 45° N as function of flight level and month.



(a) 50<sup>th</sup> Percentile. (b) 84<sup>th</sup> Percentile.

Figure 21. —Probability of ozone concentrations (ppmv) greater than indicated values for FL390 as function of latitude and month.

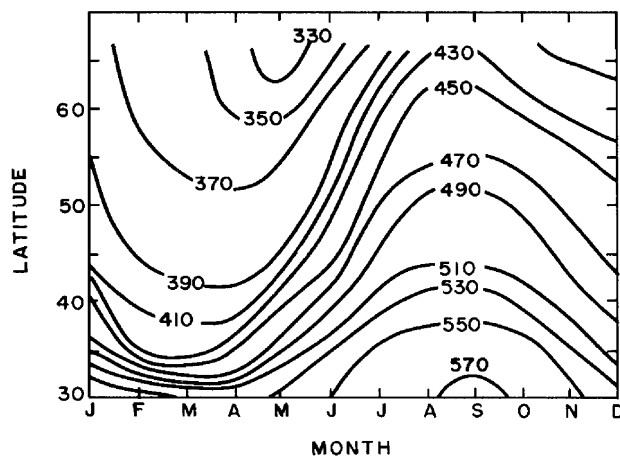


Figure 22. —Flight level for which probability is 84 percent that ambient ozone will be less than 0.6 ppmv, as a function of latitude and month.

## Concluding Remarks

This report presents a climatology of ozone at present and anticipated airliner cruise altitudes, FL190 to FL590 (19 000 to 59 000 ft). These results are based on 11 472 ozonesonde ascents from 60 stations between 1963 and 1980 and on over 160 000 Global Atmospheric Sampling Program observations taken on 4417 commercial airliner flights between 1975 and 1979. Only statistically independent data were used from each GASP flight. The distance between independent ozone observations was estimated to be 270 km from the spatial east-west autocorrelation function. Each ozonesonde ascent was treated as independent. Spot comparisons between simultaneous (both in space and time) ozonesonde and GASP measurements, together with comparisons of the mean values in grid boxes, led to the conclusions that the two data sets are compatible and that they can be combined in a single climatology.

Climatological tables of ozone from the combined data sets are given in two appendixes: one with 5° latitude resolution on a monthly basis, and one with 10° latitude resolution on a seasonal basis. For some purposes the data are required at the finest space and time resolution available, and appendix A should serve those needs. (However, in all cases when the number of observations in a grid box is relatively small, the associated statistical confidence is also small and care should be taken when applying such values.) For other purposes data with the most stable statistics possible are required, and appendix B should serve those needs. Several examples of analyses that can be made by using the tabulated data are given and discussed. These examples are intended to acquaint readers with possible interpretations of the data; they are not an exhaustive analysis of the results.

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Lewis Research Center  
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TABLE I. - FREQUENCY OF FLIGHTS ON WHICH OZONE WAS MEASURED

	ROUTE		LAT	LONG	LAT	LONG	J	F	M	A	M	J	J	A	S	O	N	D	TOT
1	SFO	HNL	37.8N	122.4W	21.3N	157.9W	45	49	21	52	25	34	30	10	15	24	11	28	344
2	HNL	LAX	21.3N	157.9W	33.9N	118.4W	20	32	27	32	26	41	34	21	11	15	14	18	288
3	JFK	LAX	40.6N	73.8W	33.9N	118.4W	13	21	17	15	8	26	9	5	2	8	7	5	136
4	JFK	HND	40.6N	73.8W	35.6N	139.9E	3	10	12	13	4	4	11	13	20	8	20	7	125
5	HNL	ORD	21.3N	157.9W	42.0N	87.9W	7	6	13	18	12	12	14	3	9	7	2	10	113
6	JFK	LHR	40.6N	73.8W	51.5N	.4W	9	3	15	5	14	11	12	7	11	15	6	2	110
7	LAX	ORD	33.9N	118.4W	42.0N	87.9W	7	16	15	12	12	15	4	5	4	5	2	10	107
8	SFO	JFK	37.6N	122.4W	40.5N	74.3W	13	5	7	12	11	8	6	9	4	11	2	17	105
9	SYD	MEL	33.9S	151.2E	37.7S	144.8E	11	18	2	6	5	13	15	19	2	7	2	3	103
10	SFO	LAX	37.6N	122.4W	33.9N	118.4W	13	8	9	12	12	9	8	10	11	7	1	3	103
11	LAX	HND	33.9N	118.4W	35.6N	139.8E	3	7	11	15	3	3	8	12	18	9	4	5	98
12	AKL	SYD	37.0S	174.8E	34.0S	151.1E	6	11	3	6	13	12	9	6	2	13	3	10	94
13	JFK	NRT	40.6N	73.8W	35.9N	140.5E	10	9	2	10	2	11	9	8	8	8	2	9	88
14	JFK	FRA	40.6N	73.8W	50.1N	8.5E	8	3	12	12	10	2	2	8	14	8	5	2	86
15	SFO	ORD	37.6N	122.4W	42.0N	88.0W	6	3	4	16	4	11	3	6	5	7	1	8	72
16	ORD	JFK	42.0N	87.9W	40.6N	73.8W	7	6	5	3	6	9	7	5	3	6	1	7	67
17	NAN	SYD	17.8S	177.4E	34.0S	151.2E	8	6	0	7	5	8	5	8	6	3	1	2	55
18	NRT	SFO	35.7N	140.4E	37.6N	122.5W	8	5	2	6	3	6	5	4	4	6	2	4	55
19	LAX	LHR	34.0N	118.4W	51.5N	.6W	0	1	0	1	3	6	13	6	8	8	5	2	53
20	LAX	NRT	34.0N	118.4W	35.9N	140.5E	4	8	1	3	3	7	4	6	5	4	2	6	51
21	LAX	DEN	34.0N	118.4W	39.8N	104.9W	1	4	9	8	3	4	4	0	3	7	4	3	50
22	HNL	NAN	21.3N	157.9W	17.7S	177.5E	4	6	0	5	3	10	3	6	5	3	1	2	48
23	LAX	GUA	33.9N	118.4W	14.7N	90.5W	7	0	5	8	13	2	4	6	2	0	0	0	47
24	LAX	ITO	33.9N	118.4W	19.8N	155.0W	2	7	5	3	7	7	2	4	1	1	1	2	42
25	SFO	HKG	37.6N	122.4W	22.3N	114.1E	4	8	0	5	7	5	0	7	7	0	0	1	42
26	HNL	SYD	21.3N	157.9W	34.0S	151.2E	7	16	1	7	0	2	0	0	3	5	0	0	41
27	LHR	FRA	51.5N	.5W	50.0N	8.6E	6	4	5	1	5	6	1	3	3	4	2	1	41
28	LAX	AKL	34.0N	118.4W	36.8S	174.9E	3	4	0	3	6	5	7	2	0	7	0	3	40
29	SEA	LHR	47.4N	122.3W	51.5N	.5W	1	2	8	8	0	13	2	0	0	4	0	4	40
30	LHR	LAD	51.5N	.4W	38.9N	77.5W	2	0	2	4	4	4	6	0	7	5	4	2	40
31	LHR	AMS	51.5N	.5W	52.3N	4.8E	0	0	1	2	4	6	10	1	7	7	1	0	39
32	HNL	GUM	21.3N	157.9W	13.4N	144.8E	0	1	4	6	9	1	8	4	0	1	0	4	38
33	JFK	FCO	40.7N	73.8W	41.8N	12.2E	4	2	1	2	2	5	2	5	4	0	6	5	38
34	LHR	BOS	51.5N	.4W	42.4N	71.0W	0	0	2	0	4	0	4	0	9	18	0	0	37
35	BAH	JFK	28.3N	50.6E	40.6N	73.8W	6	0	2	0	2	2	2	4	2	4	5	8	37
36	HKG	SIN	22.3N	114.2E	1.3N	103.9E	1	5	0	2	4	0	0	6	6	0	2	8	34
37	ORD	YYZ	42.0N	87.9W	43.7N	79.6W	8	2	5	4	3	0	0	0	2	2	0	8	34
38	HNL	PPG	21.3N	157.9W	14.2S	170.6W	0	2	0	0	8	4	0	7	0	0	3	8	32
39	DEN	ORD	39.8N	104.9W	42.0N	87.9W	1	3	8	6	0	2	4	0	1	3	2	1	31
40	DTW	BOS	42.2N	83.4W	42.4N	71.0W	0	0	1	0	2	0	4	0	6	15	0	0	28

TABLE I. - Continued.

	ROUTE		LAT	LONG	LAT	LONG	J	F	M	A	M	J	J	A	S	O	N	D	TOT
41	SFO	LHR	37.6N	122.4W	51.5N	12.5W	0	0	0	0	2	18	2	1	1	4	0	0	28
42	FRA	THR	50.1N	8.6E	35.7N	51.3E	0	0	0	0	5	5	1	3	3	5	3	1	26
43	PER	BOM	31.9S	116.0E	19.2N	72.8E	3	0	0	2	2	2	7	4	2	2	0	2	26
44	SFO	AKL	37.6N	122.4W	37.0S	174.7E	1	0	0	0	5	1	0	3	2	5	0	8	25
45	BAH	BOM	26.3N	50.6E	19.1N	72.8E	5	0	0	0	0	0	0	2	2	4	4	8	25
46	MEL	PER	37.7S	144.8E	32.0S	116.0E	2	3	2	2	2	2	7	0	2	2	0	1	25
47	GUM	MNL	13.5N	144.8E	14.5N	121.0E	0	2	4	4	6	0	4	2	0	1	0	2	25
48	SFO	HND	37.6N	122.4W	35.5N	139.8E	3	0	5	7	4	0	0	2	1	3	0	0	25
49	LHR	BRU	51.5N	12.4W	50.9N	4.3E	3	0	2	2	2	0	6	1	4	3	2	0	25
50	BKK	HKG	13.9N	100.6E	22.3N	114.2E	1	0	5	3	1	2	0	4	4	2	1	1	24
51	THR	DEL	35.7N	51.3E	28.6N	77.1E	1	0	3	0	4	4	1	3	2	4	0	1	23
52	BOM	LHR	19.1N	72.9E	51.3N	12.4W	3	0	0	2	2	1	7	4	2	0	0	2	23
53	FCO	IST	41.8N	12.3E	41.0N	28.8E	2	2	1	0	0	0	2	3	1	0	8	8	22
54	ORD	PIT	42.0N	87.9W	40.5N	80.2W	0	2	0	2	8	4	0	2	2	0	0	2	22
55	IST	THR	41.0N	28.8E	35.7N	51.4E	2	1	3	0	0	0	2	3	1	0	8	3	21
56	HNL	SEA	21.3N	157.9W	47.6N	122.3W	0	1	4	8	2	4	0	0	0	0	0	2	21
57	LAD	DTW	39.0N	77.4W	42.2N	83.4W	0	0	0	2	0	4	6	0	1	4	2	2	21
58	ORD	LAS	42.0N	87.9W	36.1N	115.1W	2	0	4	3	6	2	0	0	2	2	0	0	21
59	ORD	SEA	42.0N	87.9W	47.4N	122.3W	0	1	0	9	2	4	0	2	0	0	0	2	20
60	HKG	NRT	22.3N	114.2E	35.8N	140.4E	1	3	1	0	2	5	1	1	1	2	1	1	19
61	NRT	HNL	35.8N	140.4E	21.3N	158.0W	2	3	2	0	0	5	2	0	0	4	1	0	19
62	ORD	CLE	42.0N	87.9W	41.4N	81.8W	0	0	4	6	4	2	2	0	0	0	0	0	18
63	SFO	SEA	37.6N	122.4W	47.5N	122.3W	1	2	6	4	0	1	0	0	0	0	0	4	18
64	PPG	PPT	14.3S	170.7W	17.6S	149.6W	0	0	0	0	7	0	0	2	0	0	1	8	18
65	GUA	CCS	14.6N	90.5W	10.6N	67.0W	2	0	0	6	3	0	4	2	1	0	0	0	18
66	SEA	FAI	47.4N	122.3W	64.8N	147.8W	0	0	0	2	4	8	2	0	0	0	0	2	18
67	JFK	CPH	40.7N	73.8W	55.6N	12.6E	0	0	0	0	0	0	4	8	8	0	0	0	18
68	SYD	SIN	33.9S	151.2E	1.5N	103.8E	4	3	0	2	0	0	3	0	1	2	2	0	17
69	HKG	DEL	22.3N	114.2E	28.5N	77.1E	1	3	2	0	1	5	1	1	1	2	0	0	17
70	MEL	SIN	37.7S	144.9E	1.3N	103.9E	0	2	0	0	1	4	3	4	0	2	0	0	16
71	ORD	DTW	42.0N	87.9W	42.2N	83.4W	0	4	4	0	0	4	3	0	1	0	0	0	16
72	JFK	GIG	40.6N	73.8W	22.8S	43.2W	0	0	2	1	2	0	1	2	0	0	7	0	15
73	DEL	BKK	28.6N	77.1E	13.9N	100.6E	1	0	5	1	0	0	0	3	1	3	0	1	15
74	JFK	IAH	40.6N	73.8W	30.0N	95.3W	0	2	2	0	2	0	0	2	2	3	2	0	15
75	SIN	BKK	1.4N	103.9E	13.9N	100.6E	2	4	0	0	1	2	4	1	0	0	0	0	14
76	CCS	GIG	10.6N	67.0W	23.0S	43.3W	3	0	1	5	2	0	0	2	1	0	0	0	14
77	SYD	LAX	33.9S	151.2E	33.7N	118.4W	3	0	0	1	1	2	1	2	0	2	0	1	13
78	GUA	PTY	14.6N	90.5W	9.1N	79.4W	1	0	3	2	2	0	0	4	1	0	0	0	13
79	BAH	SIN	26.3N	50.6E	1.4N	103.9E	1	0	0	1	0	2	2	3	1	2	0	0	12
80	CLE	MIA	41.4N	81.8W	25.8N	80.3W	0	0	12	0	0	0	0	0	0	0	0	0	12

TABLE I. - Continued.

	ROUTE		LAT	LONG	LAT	LONG	J	F	M	A	M	J	J	A	S	O	N	D	TOT
81	HNL	OSA	21.3N	157.9W	34.8N	135.5E	2	4	1	1	0	0	0	0	0	2	2	0	12
82	HND	HKG	35.5N	139.8E	22.3N	114.2E	1	0	5	1	0	0	0	2	1	2	0	0	12
83	MNL	HKG	14.5N	121.0E	22.3N	114.2E	0	4	2	0	0	0	1	2	1	1	1	0	12
84	DFW	HNL	32.9N	97.1W	21.3N	157.9W	0	0	0	0	6	0	0	0	0	0	0	6	12
85	BKK	THR	13.9N	100.6E	35.7N	51.3E	0	2	0	1	1	2	0	4	1	0	1	0	12
86	HNL	PDX	21.3N	157.9W	45.9N	122.5W	0	0	0	0	2	4	2	0	0	4	0	0	12
87	JFK	DHA	40.6N	73.8W	26.3N	50.2E	0	8	0	4	0	0	0	0	0	0	0	0	12
88	PTY	GIG	9.1N	79.4W	23.0S	43.2W	1	0	2	2	2	0	0	4	1	0	0	0	12
89	SFO	YVR	37.6N	122.4W	49.2N	123.2W	4	1	0	2	0	0	0	0	2	2	0	0	11
90	GIG	VCP	22.8S	43.3W	23.0S	47.1W	2	0	0	0	6	0	0	0	2	0	0	0	10
91	DFW	JFK	32.9N	97.0W	40.7N	73.8W	0	0	0	0	6	0	0	0	0	0	0	4	10
92	THR	BOM	35.7N	51.3E	19.1N	72.9E	1	1	0	0	0	0	2	2	0	0	2	2	10
93	ATH	FCO	37.9N	23.7E	41.8N	12.2E	0	1	0	0	0	3	2	4	0	0	0	0	10
94	THR	KHI	35.7N	51.3E	24.9N	67.2E	0	0	2	0	0	1	0	2	0	0	2	2	9
95	SYD	HKG	33.9S	151.2E	22.4N	114.1E	0	0	2	0	2	0	2	0	1	1	1	0	9
96	SYD	MNL	34.0S	151.2E	14.6N	121.0E	0	2	0	0	0	0	2	2	1	1	1	0	9
97	MUC	FRA	48.1N	11.7E	50.0N	8.6E	1	0	0	2	0	0	2	0	4	0	0	0	9
98	PPG	SYD	14.3S	170.7W	33.9S	151.3E	0	2	0	0	0	3	0	4	0	0	0	0	9
99	OKA	TPE	26.2N	127.7E	25.1N	121.6E	0	0	0	1	1	1	4	2	0	0	0	0	9
100	OKA	GUM	26.2N	127.7E	13.5N	144.8E	0	0	0	1	1	1	4	2	0	0	0	0	9
101	HNL	HND	21.3N	157.9W	35.6N	139.8E	0	0	0	0	5	4	0	0	0	0	0	0	9
102	PER	SYD	31.9S	116.0E	33.9S	151.2E	3	0	0	0	0	1	1	4	0	0	0	0	9
103	NOU	SYD	22.0S	166.2E	34.0S	151.2E	1	0	0	0	0	0	0	2	0	4	2	0	9
104	THR	ATH	35.7N	51.3E	37.9N	23.7E	0	2	0	1	0	2	0	4	0	0	0	0	9
105	BKK	ATH	13.9N	100.6E	37.9N	23.8E	0	0	0	0	0	0	4	5	0	0	0	0	9
106	SYD	CHC	33.9S	151.2E	43.5S	172.6E	2	2	0	2	0	0	0	2	0	0	0	0	8
107	ATH	BEQ	37.9N	23.7E	44.8N	20.3E	0	0	0	2	0	0	2	4	0	0	0	0	8
108	ITO	ORD	19.7N	155.1W	42.0N	87.9W	0	1	0	0	1	2	3	1	0	0	0	0	8
109	PER	MRU	31.9S	116.0E	20.5S	57.7E	2	3	2	0	0	1	0	0	0	0	0	0	8
110	SFO	BOS	37.6N	122.4W	42.5N	71.0W	0	0	0	0	2	0	0	0	1	3	0	2	8
111	IST	FRA	41.0N	28.8E	50.0N	8.6E	2	0	5	1	0	0	0	0	0	0	0	0	8
112	IAH	MEX	30.0N	95.4W	19.4N	99.1W	0	2	2	0	2	0	0	2	0	0	0	0	8
113	MEL	AKL	37.7S	144.8E	37.0S	174.8E	2	5	1	0	0	0	0	0	0	0	0	0	8
114	BAH	FRA	26.3N	50.6E	50.0N	8.6E	4	2	0	0	0	0	0	0	0	1	0	0	7
115	SYD	SFO	33.9S	151.2E	37.5N	122.4W	1	0	0	0	1	0	0	1	0	2	0	2	7
116	MRU	JNB	20.4S	57.7E	26.1S	28.2E	2	2	2	0	0	1	0	0	0	0	0	0	7
117	SEA	LAX	47.5N	122.3W	34.0N	118.4W	0	0	0	5	1	1	0	0	0	0	0	0	7
118	BKK	BAH	13.9N	100.6E	26.3N	50.6E	2	3	0	0	0	0	0	1	0	0	0	0	6
119	JFK	EZE	40.7N	73.8W	34.9S	58.6W	0	0	0	0	2	0	0	0	2	0	2	0	6
120	LAX	PPT	34.0N	118.4W	17.5S	149.5W	0	0	0	0	2	0	0	0	0	1	1	2	6

TABLE I. - Continued.

	ROUTE	LAT	LONG	LAT	LONG	J	F	M	A	M	J	J	A	S	O	N	D	TOT
121	HKG LAX	22.3N	114.2E	33.9N	118.6W	0	0	0	0	0	0	0	1	1	0	1	3	6
122	MEL BKK	37.7S	144.8E	13.9N	100.7E	0	0	0	0	0	0	0	6	0	0	0	0	6
123	HNL LAS	21.3N	157.9W	36.1N	115.1W	1	0	0	1	1	0	0	0	0	1	1	0	5
124	KUL BAH	3.1N	101.6E	28.2N	50.7E	1	0	0	1	0	0	0	0	0	1	2	0	5
125	HNL AKL	21.3N	157.9W	37.0S	174.8E	0	0	0	1	2	1	0	0	0	0	1	0	5
126	LAS LAX	36.1N	115.1W	34.0N	118.4W	0	1	0	1	1	0	0	0	0	1	1	0	5
127	MIQ OIG	10.6N	67.0W	22.8S	43.2W	0	0	0	0	5	0	0	0	0	0	0	0	5
128	DEL FRA	28.6N	77.1E	50.1N	8.5E	0	3	2	0	0	0	0	0	0	0	0	0	5
129	SNN JFK	52.7N	8.9W	40.6N	73.8W	1	0	1	0	1	0	0	0	0	0	1	0	4
130	SFO OKA	37.6N	122.4W	26.2N	127.8E	0	1	0	1	0	0	0	0	0	0	0	2	4
131	DEL KHI	28.6N	77.1E	24.9N	67.2E	0	0	2	1	0	1	0	0	0	0	0	0	4
132	MIQ GUA	10.6N	67.0W	14.6N	90.5W	0	0	1	0	3	0	0	0	0	0	0	0	4
133	OKA HKG	26.2N	127.7E	22.3N	114.2E	0	1	0	1	0	0	0	0	0	0	0	2	4
134	GUA SJO	14.6N	90.5W	10.0N	84.2W	2	0	0	0	2	0	0	0	0	0	0	0	4
135	SYD DRW	33.9S	151.2E	12.4S	130.9E	0	0	0	1	0	0	0	3	0	0	0	0	4
136	BAH BEG	26.3N	50.6E	44.8N	20.3E	0	0	0	0	0	2	0	2	0	0	0	0	4
137	DRW BKK	12.4S	130.9E	13.9N	100.7E	0	0	0	2	0	0	0	2	0	0	0	0	4
138	BAH LHR	26.3N	50.6E	51.5N	5.5W	0	0	0	0	0	0	2	2	0	0	0	0	4
139	SJO PTY	10.0N	84.2W	9.1N	79.4W	2	0	0	0	2	0	0	0	0	0	0	0	4
140	ORD PHL	42.0N	87.9W	39.9N	75.2W	0	0	0	0	0	0	4	0	0	0	0	0	4
141	BEG FRA	44.8N	20.3E	50.0N	8.6E	0	0	0	1	0	0	2	1	0	0	0	0	4
142	ATH LHR	37.9N	23.7E	51.5N	5.5W	0	0	0	0	0	0	0	4	0	0	0	0	4
143	VIE FRA	48.1N	16.6E	50.1N	8.6E	0	0	0	0	0	1	0	2	0	0	0	0	3
144	TPE HKG	25.1N	121.5E	22.3N	114.2E	0	0	0	0	0	2	0	0	0	0	1	0	3
145	BDA BOS	32.4N	64.6W	42.4N	71.0W	0	0	0	0	3	0	0	0	0	0	0	0	3
146	DRW SIN	12.4S	130.9E	1.4N	103.9E	0	2	0	0	0	0	0	1	0	0	0	0	3
147	DAM BKK	33.4N	36.5E	13.8N	100.4E	0	0	0	1	1	0	0	1	0	0	0	0	3
148	BGR LAX	44.9N	68.8W	34.0N	118.4W	0	0	0	0	0	1	0	0	0	0	1	1	3
149	BEY IST	33.8N	35.5E	41.0N	28.8E	0	0	3	0	0	0	0	0	0	0	0	0	3
150	SYD BKK	33.9S	151.2E	14.0N	100.6E	0	0	0	0	0	0	0	2	0	1	0	0	3
151	QUM HKG	13.5N	144.8E	22.3N	114.2E	0	0	0	0	2	0	0	0	0	0	0	1	3
152	ORD BOS	42.0N	87.9W	42.4N	71.0W	0	0	0	0	0	0	0	0	1	2	0	0	3
153	MIQ MIA	10.6N	67.0W	25.8N	80.3W	0	0	0	0	2	0	0	0	0	0	0	0	2
154	SYD BNE	33.9S	151.2E	27.4S	153.1E	0	2	0	0	0	0	0	0	0	0	0	0	2
155	JFK CUN	40.6N	73.8W	21.0N	86.9W	0	0	2	0	0	0	0	0	0	0	0	0	2
156	DTW LHR	42.2N	83.4W	51.5N	5.5W	0	0	0	0	2	0	0	0	0	0	0	0	2
157	ORD BDL	42.0N	87.9W	41.9N	72.7W	0	0	0	2	0	0	0	0	0	0	0	0	2
158	KHI BEY	24.9N	67.2E	33.8N	35.5E	0	0	2	0	0	0	0	0	0	0	0	0	2
159	MIA CCS	25.8N	80.3W	10.6N	67.0W	0	0	0	2	0	0	0	0	0	0	0	0	2
160	BNE DRW	27.4S	153.1E	12.4S	130.9E	0	2	0	0	0	0	0	0	0	0	0	0	2

TABLE I. - Continued.

	ROUTE		LAT	LONG	LAT	LONG	J	F	M	A	M	J	J	A	S	O	N	D	TOT
161	BEG	VIE	44.8N	20.3E	48.1N	16.6E	0	0	0	0	0	1	0	1	0	0	0	0	2
162	JFK	IND	40.7N	73.8W	39.7N	86.3W	0	0	0	2	0	0	0	0	0	0	0	0	2
163	GUM	NRT	13.5N	144.8E	35.8N	140.4E	0	0	0	0	0	0	0	0	0	0	0	2	2
164	SYD	SYD	33.9S	151.2E	33.9S	151.2E	0	0	0	0	0	0	0	0	0	0	2	0	2
165	ATH	BAH	37.9N	23.7E	26.2N	50.6E	1	0	0	0	0	0	0	1	0	0	0	0	2
166	IST	BOM	41.0N	28.8E	19.1N	72.9E	1	1	0	0	0	0	0	0	0	0	0	0	2
167	ATH	DAM	37.9N	23.7E	33.4N	36.5E	0	0	0	1	0	0	0	1	0	0	0	0	2
168	LAX	OMH	34.0N	118.4W	41.3N	95.9W	0	0	0	0	0	0	0	0	0	0	0	2	2
169	BEG	ORY	44.8N	20.3E	48.8N	2.4E	0	0	0	0	0	0	0	2	0	0	0	0	2
170	CCS	LAX	10.6N	67.0W	33.8N	118.4W	1	0	1	0	0	0	0	0	0	0	0	0	2
171	SYD	HND	33.9S	151.2E	35.4N	139.8E	0	2	0	0	0	0	0	0	0	0	0	0	2
172	GIG	EZE	22.8S	43.3W	34.8S	58.5W	0	0	0	0	0	0	0	2	0	0	0	0	2
173	STL	HNL	38.8N	90.4W	21.4N	157.9W	0	0	2	0	0	0	0	0	0	0	0	0	2
174	BAH	FCO	28.3N	50.6E	41.8N	12.2E	0	0	0	0	0	0	0	0	0	2	0	0	2
175	FCO	FRA	41.8N	12.3E	50.1N	8.6E	0	0	0	0	0	0	0	0	0	2	0	0	2
176	ORY	DAM	48.7N	2.4E	33.5N	36.6E	0	0	0	0	0	0	0	0	0	1	1	0	2
177	DAM	BAH	33.4N	36.5E	26.3N	50.7E	0	0	0	0	0	0	0	0	0	1	1	0	2
178	HNL	HNL	21.3N	167.9W	21.3N	167.9W	0	0	0	0	0	0	0	0	0	0	2	0	2
179	MEL	MEL	37.7S	144.8E	37.7S	144.8E	0	0	0	0	0	0	0	0	0	0	2	0	2
180	AKL	AKL	37.0S	174.8E	37.0S	174.8E	0	0	0	0	1	0	0	0	0	0	0	0	1
181	IST	KHI	41.0N	28.8E	24.9N	67.2E	0	0	0	1	0	0	0	0	0	0	0	0	1
182	BEY	THR	33.8N	35.5E	35.7N	51.3E	0	0	1	0	0	0	0	0	0	0	0	0	1
183	PTY	MIQ	9.1N	79.4W	10.6N	67.0W	0	0	1	0	0	0	0	0	0	0	0	0	1
184	FRA	BOM	50.1N	8.6E	19.2N	73.1E	0	0	0	0	1	0	0	0	0	0	0	0	1
185	BOM	BKK	19.1N	72.9E	13.7N	100.6E	0	0	0	0	1	0	0	0	0	0	0	0	1
186	PER	SIN	31.9S	116.0E	1.4N	103.9E	0	0	0	0	0	1	0	0	0	0	0	0	1
187	SIN	MRU	1.4N	103.9E	20.4S	57.7E	0	0	0	0	0	1	0	0	0	0	0	0	1
188	MEL	DEL	37.7S	144.9E	28.6N	77.1E	0	0	0	0	0	1	0	0	0	0	0	0	1
189	LHR	LPA	51.4N	.6W	27.9N	15.4W	0	0	0	0	0	0	0	0	0	0	0	1	1
190	LPA	BOR	27.9N	15.4W	44.9N	68.8W	0	0	0	0	0	0	0	0	0	0	0	1	1
191	AMS	ATH	52.3N	4.8E	37.9N	23.8E	1	0	0	0	0	0	0	0	0	0	0	0	1
192	BOM	AMS	19.1N	72.9E	52.3N	4.8E	0	0	0	0	0	1	0	0	0	0	0	0	1
193	HND	IAD	35.5N	139.8E	38.8N	77.4W	0	0	0	0	0	0	0	0	0	0	0	1	1
194	KHI	BKK	24.9N	67.2E	14.2N	100.7E	0	0	0	0	0	1	0	0	0	0	0	0	1
195	ATH	PIK	37.9N	23.7E	55.5N	4.6W	0	0	0	0	0	1	0	0	0	0	0	0	1
196	PIK	BOR	55.5N	4.6W	44.8N	68.8W	0	0	0	0	0	1	0	0	0	0	0	0	1
197	KHI	FRA	24.9N	67.2E	50.1N	8.4E	0	0	0	0	0	1	0	0	0	0	0	0	1
198	FCO	SNN	41.8N	12.2E	52.7N	8.9W	1	0	0	0	0	0	0	0	0	0	0	0	1
199	LHR	BEG	51.5N	.5W	44.8N	20.4E	0	0	0	1	0	0	0	0	0	0	0	0	1
200	SFO	GUM	37.6N	122.4W	13.5N	144.9E	0	0	0	0	0	0	0	0	0	0	0	1	1

TABLE I. - Concluded.

	ROUTE		LAT	LONG	LAT	LONG	J	F	M	A	M	J	J	A	S	O	N	D	TOT
201	BKK	PER	13.9N	100.6E	32.1S	115.9E	0	0	0	0	0	0	1	0	0	0	0	0	1
202	JFK	LAS	40.6N	73.8W	36.1N	115.2W	0	1	0	0	0	0	0	0	0	0	0	0	1
203	BAH	ORY	26.3N	50.7E	48.7N	2.3E	0	0	0	1	0	0	0	0	0	0	0	0	1
204	AMS	VIE	52.3N	4.8E	48.1N	16.6E	0	0	0	1	0	0	0	0	0	0	0	0	1
205	ATH	DEL	37.9N	23.7E	28.6N	77.1E	0	0	0	0	0	0	0	1	0	0	0	0	1
206	VIE	BAH	48.1N	16.6E	26.2N	50.6E	0	0	0	1	0	0	0	0	0	0	0	0	1
207	ORD	STL	42.0N	87.9W	38.8N	90.4W	0	0	1	0	0	0	0	0	0	0	0	0	1
208	JFK	SEA	40.6N	73.8W	47.5N	122.4W	0	0	0	0	0	0	0	1	0	0	0	0	1
209	SEA	HND	47.4N	122.3W	35.5N	139.6E	0	0	0	0	0	0	0	1	0	0	0	0	1
210	DEL	IST	28.6N	77.1E	40.9N	28.8E	1	0	0	0	0	0	0	0	0	0	0	0	1
211	MIA	CUR	25.8N	80.3W	12.3N	68.9W	0	0	0	1	0	0	0	0	0	0	0	0	1
212	FCO	LHR	41.8N	12.3E	51.5N	.5W	0	0	0	0	0	0	0	0	1	0	0	0	1
213	JFK	ANC	40.7N	73.8W	61.2N	150.0W	0	0	0	0	0	0	0	0	1	0	0	0	1
214	ANC	HND	61.2N	150.0W	35.6N	139.8E	0	0	0	0	0	0	0	0	1	0	0	0	1
215	LHR	CPT	51.5N	.4W	33.9S	18.7E	0	0	0	0	0	0	0	0	0	1	0	0	1
216	CPT	AKL	34.0S	18.6E	36.9S	174.9E	0	0	0	0	0	0	0	0	0	1	0	0	1
217	HNL	NOU	21.3N	157.9W	21.8S	166.3E	1	0	0	0	0	0	0	0	0	0	0	0	1
218	JFK	CTS	40.6N	73.8W	42.8N	141.7E	0	1	0	0	0	0	0	0	0	0	0	0	1
219	FCO	YQX	41.8N	12.2E	49.0N	54.5W	1	0	0	0	0	0	0	0	0	0	0	0	1
220	YQX	JFK	49.0N	54.6W	40.6N	73.7W	1	0	0	0	0	0	0	0	0	0	0	0	1
221	IAH	SFO	30.0N	95.4W	37.6N	122.4W	0	0	0	0	0	0	0	0	0	1	0	0	1
222	JFK	DEL	40.6N	73.8W	28.6N	77.4E	0	0	0	0	1	0	0	0	0	0	0	0	1
223	PPG	MEL	14.3S	170.7W	37.7S	144.8E	0	0	0	0	0	0	0	0	0	0	1	0	1
224	HNL	DTW	21.3N	157.9W	42.2N	83.4W	0	0	0	1	0	0	0	0	0	0	0	0	1
225	MEL	CHC	37.7S	144.8E	43.5S	172.5E	0	0	0	0	0	0	0	0	0	0	1	0	1
226	CHC	CHC	43.5S	172.5E	43.5S	172.4E	0	0	0	0	0	0	0	0	0	0	1	0	1
227	CHC	PPG	43.5S	172.4E	14.3S	170.8W	0	0	0	0	0	0	0	0	0	0	1	0	1
228	BAH	AMS	26.3N	50.6E	52.3N	4.7E	0	0	0	0	0	0	0	0	0	0	1	0	1
229	JFK	ATH	40.6N	73.8W	37.8N	23.8E	0	0	0	0	0	0	0	0	0	0	1	0	1
230	ATH	BGR	37.9N	23.7E	44.8N	68.8W	0	0	0	0	0	0	0	0	0	0	1	0	1
231	LAX	PIK	34.0N	118.4W	55.4N	4.6W	0	0	0	0	0	0	0	0	0	0	1	0	1
232	PIK	LHR	55.5N	4.6W	51.5N	.5W	0	0	0	0	0	0	0	0	0	0	1	0	1
233	SFO	TPE	37.6N	122.4W	25.1N	121.5E	0	0	0	0	0	0	0	0	0	0	1	0	1
234	MUC	SNN	48.1N	11.7E	52.7N	8.9W	0	0	0	0	0	0	0	0	0	0	1	0	1

TABLE II. - OZONESONDE STATIONS BY REGION

Station	Latitude	Longitude	Period of record	Total number of ascents
Antarctica:				
Amundsen-Scott	90.0S	24.8W	3/62-12/66	111
King Baudouin	70.4S	24.3E	3/65-12/66	27
Hallet	72.3S	170.3E	11/63-12/66	26
Byrd	80.0S	119.5W	11/63-12/66	111
Syowa	69.0S	39.6E	11/67-10/79	133
Wilkes	66.2S	110.5E	2/63-11/63	7
Australia/New Zealand:				
Aspendale	38.0S	145.1E	6/25-7/79	705
Christchurch	43.5S	172.5E	3/65-12/65	25
India:				
Trivandrum	8.5N	77.0E	7/69-12/76	32
Bombay	19.1N	72.9E	12/68-12/69	7
Poona	18.5N	73.9E	2/66-12/76	135
Mt. Abu	24.6N	72.7E	3/65-4/66	4
New Delhi	28.6N	77.2E	1/69-12/76	99
Japan:				
Kagoshima	31.6N	130.6E	12/68-12/79	210
Iateno	36.1N	140.1E	3/68-12/79	233
Sapporo	43.0N	141.3E	12/68-12/79	237
Islands and ships:				
Hilo, Hawaii	19.7N	155.1W	12/64-12/65	17
Canton Island	2.8S	171.7W	2/65-12/65	32
Grand Turk	21.5N	71.2W	12/63-5/69	128
R/V Ak. Shirshov	(a)	(a)	5/77-8/77	29
USNS Eltanin	(a)	(a)	3/65-4/66	21
South America:				
Puerto Montt, Chile	41.4S	72.8W	12/64-1/66	22
LaPaz, Bolivia	16.5S	68.0W	3/65-9/65	10
Natal, Brazil	5.9S	35.4W	8/79-11/79	7
Central America:				
Balboa/Canal Zone, Panama	9.0N	79.6W	1/63-5/69	123
Ft. Sherman, Panama	9.4N	79.9W	7/77-7/77	58
North America:				
Tallahassee, Florida	30.4N	74.3W	1/63-5/68	147
Cape Canaveral, Florida	28.5N	80.6W	2/66-5/69	134
Palestine, Texas	31.8N	95.7W	10/77-9/79	47
Albuquerque, New Mexico	35.0N	106.6W	1/63-12/65	205
Topeka, Kansas	39.1N	95.6W	4/63-5/63	10
Wallops Island, Virginia	37.9N	75.5W	2/67-3/80	438
Sterling, Virginia	39.0N	77.5W	8/62-6/66	179
Boulder, Colorado	40.0N	105.2W	8/63-7/66	495
Fort Collins, Colorado	40.6N	105.1W	1/63-6/67	208
Madison/Green Bay, Wisconsin	43.1N	89.4W	1/63-12/65	83
Toronto, Ontario	43.8N	79.5W	11/76-4/80	12
Seattle, Washington	47.4N	122.3W	1/63-12/65	146
Bedford, Massachusetts	42.5N	71.3W	12/62-3/71	578
Yorkton, Saskatchewan	51.3N	102.5W	7/75-8/78	99
Cold Lake, Alberta	54.8N	110.1W	2/77-2/80	46
Edmonton, Alberta	53.6N	114.1W	10/70-4/80	386
Churchill, Manitoba	58.8N	94.1W	1/63-4/80	405
Goose Bay, Newfoundland	53.3N	60.4W	1/63-4/80	731
Fairbanks, Alaska	64.8N	147.9W	4/63-12/65	106
Poker Flat, Alaska	65.1N	147.5W	7/79-7/79	7
Resolute, Northwest Territories	74.7N	95.0W	1/66-4/80	628
Thule, Greenland	76.5N	68.8W	1/63-1/66	91

<sup>a</sup>Variable.

Western Europe:				
Lisbon, Portugal	38.8N	9.2W	6/73-4/76	80
Cagliari/Elmas, Italy	39.2N	9.0E	7/68-8/76	225
El Arenosillo, Spain	37.1N	6.7W	5/77-5/77	17
Payerne, Switzerland	46.8N	6.9E	8/68-1/77	1033
Thalwil, Switzerland	47.3N	8.6E	9/66-7/68	243
Biscarrosse, France	44.4N	1.2W	3/76-4/80	216
Paris/Val Joyeux, France	48.8N	2.3E	1/64-5/67	63
Garmisch Partenkirchen, FRG	47.5N	11.1E	1/78-1/79	126
Hohenpeissenberg, FRG	47.8N	11.0E	3/65-4/80	965
Lindenberg, GDR	52.2N	14.1E	1/75-4/80	317
Uccle, Belgium	50.8N	4.3E	9/65-9/67	100
Tempelhof/Berlin, FRG	52.5N	13.4E	11/66-1/73	357



# **Appendix A** **Ambient Ozone Climatological Tabulations in 5° Latitude by** **45° Longitude by 2000-ft Altitude Intervals by Month**

[Units of ozone, ppmv.]

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

JANUARY  
FL 190

									MEAN	LAT
70N										70N
65					.046 .015 5 .038 .060 .071				.046 .015 5 .038 .060 .071	65
60						.036 .013 33 .032 .046 .066			.036 .013 33 .032 .046 .066	60
55						.044 .013 39 .042 .050 .074	.039 .014 69 .037 .046 .081	.037 .016 35 .035 .048 .077	.040 .015 143 .038 .049 .092	55
50								.045 .017 135 .041 .059 .089	.045 .017 135 .041 .059 .089	50
45			.045 .009 19 .044 .050 .068		.027 .007 12 .026 .033 .037	.032 .007 12 .032 .040 .044	.057 .119 65 .041 .059 .082	.035 .010 136 .035 .045 .054	.041 .063 244 .033 .048 .067	45
40					.037 .012 3 .039 .046 .050	.038 .014 114 .039 .052 .061	.094 .032 2 .094 .116 .125	.039 .008 24 .040 .046 .050	.039 .015 143 .039 .051 .064	40
35			.045 .012 21 .042 .054 .070		.054 1	.026 .010 27 .023 .036 .047			.035 .014 49 .035 .048 .063	35
30		.030 .012 15 .029 .037 .054	.048 .012 24 .049 .058 .073			.037 .015 29 .033 .053 .070			.039 .015 68 .035 .054 .071	30
25	.034 1								.034 1	25
20		.035 .017 10 .038 .051 .061	.030 1		.042 .011 2 .042 .049 .053		.024 .010 12 .022 .035 .038		.030 .015 25 .030 .043 .058	20
15										15
10		.021 .015 2 .021 .031 .035				.023 .009 6 .021 .028 .041			.023 .011 8 .021 .035 .042	10
5										5
0										0
5										5
10										10
15										15
20										20
25	.029 1								.029 1	25
30										30
35										35
40			.040 .013 57 .040 .054 .066				.017 .010 5 .017 .024 .034		.038 .014 62 .038 .053 .066	40
45S										45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E	
	LONGITUDE									

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JANUARY  
FL 230

								MEAN	LAT
70N									70N
65				.049 .020 5 .038 .063 .084				.049 .020 5 .038 .063 .084	65
60					.043 .019 33 .034 .066 .082			.043 .019 33 .034 .066 .082	60
55					.046 .012 39 .044 .057 .073	.047 .019 69 .043 .061 .093	.038 .018 37 .039 .049 .078	.044 .018 145 .042 .057 .083	55
50	.072 1						.049 .021 142 .046 .066 .110	.049 .021 143 .046 .067 .110	50
45		.054 .011 19 .050 .061 .082		.029 .018 12 .025 .032 .073	.039 .015 12 .038 .049 .068	.061 .119 65 .043 .069 .094	.037 .014 136 .036 .049 .074	.044 .063 244 .035 .054 .083	45
40				.049 .001 3 .049 .050 .051	.041 .016 114 .039 .056 .080	.064 .009 4 .067 .071 .074	.042 .010 25 .042 .052 .058	.042 .015 146 .039 .055 .076	40
35	.013 1		.049 .015 24 .047 .066 .079	.063 .071 6 .030 .077 .203	.032 .023 34 .030 .040 .087			.041 .031 65 .037 .054 .124	35
30		.032 .012 16 .031 .046 .052	.049 .012 24 .048 .056 .079		.038 .017 29 .036 .049 .078			.040 .016 69 .040 .052 .081	30
25	.050 .006 2 .050 .054 .056							.050 .006 2 .050 .054 .056	25
20		.045 .020 10 .045 .063 .074	0 000 1	.065 1		.029 .013 12 .029 .039 .055		.036 .020 24 .027 .060 .071	20
15									15
10		.021 .016 2 .021 .032 .036			.022 .006 6 .022 .025 .034			.022 .010 8 .022 .034 .037	10
5									5
0									0
5									5
10									10
15									15
20									20
25									25
30		.047 1						.047 1	30
35		.024 1	.041 .019 5 .048 .057 .063					.038 .018 6 .036 .055 .063	35
40		.044 .017 57 .043 .061 .091				.024 .010 5 .024 .033 .038		.043 .018 62 .041 .056 .085	40
45S									45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
	LONGITUDE								

JANUARY  
FL 250

											MEAN			LAT								
70N																				70N		
65						.049 .041	.014 .065	5 .069								.049 .041	.014 .065	5 .069		65		
60									.050 .042	.025 .060	.33 .113					.050 .042	.025 .060	.33 .113		60		
55									.050 .045	.019 .057	.39 .102	.052 .045	.026 .071	.69 .121	.040 .039	.021 .051	.37 .089	.046 .044	.023 .065	.145 .113	55	
50															.052 .047	.027 .071	.145 .124	.052 .047	.027 .071	.145 .124	50	
45				.066 .059	.021 .088	.19 .114	.026 .027	.007 .033	.12 .034	.039 .035	.021 .046	.14 .091	.068 .045	.120 .073	.65 .161	.040 .037	.019 .054	.138 .083	.046 .035	.065 .060	.248 .132	45
40	.024 .024	0.000 .024	2 .024				.054 .046	.032 .079	4 .103	.044 .040	.020 .061	.119 .087	.109 .068	.083 .156	3 .193	.046 .045	.011 .057	.24 .064	.045 .040	.023 .061	.152 .106	40
35				.050 .044	.016 .059	.23 .086			.088 .088	.015 .098	2 .102	.037 .029	.025 .053	.33 .111				.044 .033	.024 .056	.58 .102		35
30		.033 .032	.015 .050	15 .058	.052 .049	.016 .061	.24 .090			.041 .038	.019 .051	.29 .096						.043 .043	.019 .057	.68 .094		30
25	.052	1																.052		1		25
20		.044 .047	.023 .063	11 .079			.030 .018	.017 .042	3 .053				.025 .020	.012 .037	12 .047			.033 .027	.020 .050	.26 .074		20
15																						15
10		.023 .023	.014 .033	2 .036						.021 .020	.008 .028	6 .030						.021 .020	.009 .030	8 .036		10
5																						5
0																						0
5																						5
10																						10
15																						15
20																						20
25													.035	1				.035		1		25
30																						30
35				.042	1													.042		1		35
40				.046 .044	.016 .064	.57 .079							.028 .025	.013 .039	5 .048			.045 .043	.017 .062	.62 .079		40
45S																						45S
		15E	60E	105E	150E	165W	120W	75W	30W	15E												
LONGITUDE																						

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JANUARY  
FL 270

	MEAN										LAT
70N											70N
65					.050 .015 5 .043 .067 .072					.050 .015 5 .043 .067 .072	65
60						.060 .035 33 .048 .092 .152				.060 .035 33 .048 .092 .152	60
55						.058 .035 39 .051 .064 .155	.065 .044 69 .047 .097 .179	.043 .024 37 .039 .058 .106		.057 .038 145 .046 .086 .165	55
50							.033 .003 2 .033 .035 .036	.058 .031 137 .049 .084 .144		.058 .031 139 .049 .084 .143	50
45	.050 .028 4 .039 .073 .093		.082 .035 19 .072 .121 .152		.031 .010 12 .028 .038 .053	.050 .031 12 .040 .069 .124	.074 .120 68 .050 .081 .207	.043 .028 140 .038 .055 .118		.054 .068 255 .042 .073 .154	45
40	.027 .005 2 .027 .030 .031				.041 .021 4 .046 .059 .063	.050 .033 120 .042 .076 .151	.074 .071 6 .054 .098 .212	.049 .014 25 .048 .063 .074		.050 .033 157 .043 .070 .154	40
35			.054 .022 23 .046 .070 .108		.087 .074 8 .066 .090 .250	.043 .038 37 .033 .054 .133				.052 .042 68 .029 .079 .192	35
30		.035 .018 16 .034 .053 .073	.060 .031 24 .050 .068 .146			.042 .023 29 .036 .054 .109				.046 .027 69 .042 .062 .116	30
25	.025 1	.044 1			.044 1					.038 .009 3 .044 .044 .044	25
20		.053 .022 10 .051 .074 .089	.031 1		.034 .010 7 .034 .041 .052		.030 .013 12 .029 .042 .053			.039 .019 30 .037 .054 .088	20
15											15
10		.026 .012 2 .026 .033 .037				.023 .005 6 .021 .024 .034				.024 .008 8 .021 .033 .037	10
5						.022 1				.022 1	5
0			.045 1							.045 1	0
5											5
10											10
15											15
20	.075 1	.082 .027 2 .082 .100 .108		.034 1			.034 .003 2 .034 .036 .037			.057 .028 6 .045 .082 .106	20
25		.067 .018 4 .061 .083 .093					.034 1			.060 .021 5 .053 .078 .093	25
30		.050 .019 6 .050 .064 .078	.033 1							.047 .018 7 .045 .061 .078	30
35			.037 1	.029 .001 2 .029 .029 .029						.031 .004 3 .029 .034 .037	35
40			.054 .028 57 .048 .070 .117				.033 .017 5 .028 .047 .058			.052 .028 62 .047 .068 .115	40
45S											45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

MEAN LAT

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JANUARY  
FL 310

MEAN										LAT
70N										70N
65					.125 .082 5 .104 .193 .282				.125 .082 5 .104 .193 .282	65
60						.112 .069 33 .097 .199 .263			.112 .069 33 .097 .199 .263	60
55						.102 .070 38 .066 .174 .267	.122 .084 69 .110 .207 .320	.065 .046 48 .051 .114 .188	.099 .075 155 .066 .175 .298	55
50					.167 .087 5 .174 .255 .281			.088 .065 150 .061 .154 .250	.091 .067 155 .063 .162 .282	50
45	.158 .089 3 .107 .227 .276		.148 .068 19 .173 .220 .240		.054 .057 20 .038 .078 .210	.090 .071 23 .057 .144 .269	.096 .090 75 .055 .169 .330	.057 .050 142 .041 .086 .217	.077 .072 282 .029 .128 .316	45
40	.079 .045 8 .067 .104 .171				.094 .103 9 .049 .189 .310	.077 .063 132 .053 .131 .239	.084 .068 7 .048 .130 .209	.060 .022 24 .054 .083 .108	.076 .062 180 .052 .120 .240	40
35	.082 .038 9 .079 .126 .137		.089 .051 28 .069 .148 .206		.039 .027 15 .031 .048 .112	.061 .056 37 .043 .095 .201			.088 .052 89 .047 .126 .203	35
30	.064 .047 13 .049 .085 .180	.036 .021 19 .036 .048 .087	.063 .027 30 .057 .089 .118		.036 .013 10 .031 .050 .062	.051 .035 31 .040 .065 .156			.052 .033 103 .046 .072 .127	30
25	.075 .034 8 .063 .108 .142	.076 .037 4 .055 .100 .135	.020 .015 5 .011 .038 .041		.031 .009 6 .033 .039 .040				.052 .037 23 .043 .069 .144	25
20		.048 .020 18 .050 .064 .089	.025 .009 6 .025 .031 .038	.056 .015 4 .053 .069 .079	.051 .032 17 .043 .086 .120	.046 1	.030 .014 12 .029 .047 .052		.043 .024 58 .027 .058 .106	20
15		.033 .022 6 .030 .053 .069	.021 1		.024 .008 6 .025 .032 .034	.059 1			.030 .018 14 .026 .047 .068	15
10		.032 .006 2 .032 .036 .038		.027 .005 8 .028 .031 .034	.022 .007 4 .024 .028 .029	.029 .010 7 .023 .040 .045	.040 .007 3 .040 .045 .048		.029 .009 24 .028 .039 .047	10
5		.042 1		.021 .008 10 .017 .032 .034					.023 .010 11 .017 .033 .041	5
0		.032 1		.014 .002 8 .014 .016 .016					.018 .006 9 .014 .016 .029	0
5				.012 .003 6 .012 .015 .017					.012 .003 6 .012 .015 .017	5
10				.021 .004 3 .021 .024 .026					.021 .004 3 .021 .024 .026	10
15			.044 .005 2 .044 .047 .048	.014 1			.048 1		.037 .014 4 .044 .048 .048	15
20	.011 1	.055 1	.100 1	.014 .010 5 .009 .025 .029			.026 .013 2 .026 .035 .038		.028 .028 18 .016 .048 .092	20
25	.041 .028 4 .037 .062 .081	.072 .013 2 .072 .080 .084		.042 1					.050 .028 7 .042 .084 .084	25
30			.061 .026 9 .075 .087 .090	.039 .007 2 .030 .035 .037					.056 .026 11 .044 .085 .090	30
35			.083 .076 5 .047 .131 .218	.041 .011 5 .040 .053 .053					.062 .058 18 .038 .065 .203	35
40			.055 .022 57 .056 .079 .098				.044 .023 5 .043 .062 .078		.054 .022 62 .053 .079 .098	40
45S										45S
15E	60E	105E	150E	165W	120W	75W	30W	15E		
LONGITUDE										

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JANUARY  
FL 330

		MEAN										LAT	
70N													70N
65													65
60													60
55													55
50													50
45													45
40													40
35													35
30													30
25													25
20													20
15													15
10													10
5													5
0													0
5													5
10													10
15													15
20													20
25													25
30													30
35													35
40													40
45S													45S
15E	60E	105E	150E	165W	120W	75W	30W	15E					





CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JANUARY  
FL 370

														MEAN			LAT
70N																70N	
65																65	
60																60	
55																55	
50																50	
45																45	
40																40	
35																35	
30																30	
25																25	
20																20	
15																15	
10																10	
5																5	
0																0	
5																5	
10																10	
15																15	
20																20	
25																25	
30																30	
35																35	
40																40	
45S																45S	
75E	60E	105E	150E	165W	120W	75W	30W	15E									

LONGITUDE

JANUARY  
FL 390

33

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JANUARY  
FL 410

		MEAN										LAT
70N												70N
65						.500 .189 5 .595 .634 .642						65
60					.638 1	.410 .128 11 .426 .540 .563	.522 .190 43 .494 .699 .894	.463 .099 4 .457 .554 .596				60
55					.895 .292 38 .909 1.220 1.419	.624 1	.481 .210 56 .471 .692 .877	.538 .206 72 .547 .696 1.001	.395 .149 35 .367 .544 .709			55
50					.751 .331 42 .730 1.097 1.389	.367 .194 8 .318 .568 .717	.587 .161 18 .535 .739 .885	.047 .018 9 .044 .065 .081	.375 .192 145 .350 .567 .738	.450 .278 222 .378 .711 1.195		50
45			.644 .208 28 .621 .846 1.055		.631 .265 41 .562 .941 1.230	.393 .242 47 .351 .541 1.159	.471 .165 28 .459 .581 .896	.399 .301 70 .343 .616 1.300	.287 .163 136 .270 .442 .721	.467 .258 350 .347 .620 1.135		45
40	.334 .187 4 .318 .503 .589		.486 .198 23 .466 .680 .854		.381 .124 8 .383 .442 .619	.346 .174 51 .336 .510 .712	.313 .240 136 .221 .570 .954	.042 1	.197 .106 24 .165 .285 .463	.326 .220 247 .257 .564 .899		40
35	.279 .185 8 .285 .434 .551		.309 .173 24 .289 .416 .745		.441 .170 12 .456 .613 .738	.160 .111 18 .132 .219 .438	.179 .105 30 .134 .278 .421			.252 .172 92 .196 .424 .721		35
30	.115 .036 6 .108 .155 .169	.046 .017 15 .044 .065 .075	.080 .028 27 .077 .104 .140			.150 .116 15 .106 .221 .450	.140 .094 29 .097 .271 .323			.107 .083 92 .064 .160 .320		30
25	.095 .027 3 .082 .116 .130	.078 .008 2 .078 .083 .086	.031 .003 3 .033 .034 .034			.072 .018 11 .074 .088 .106				.070 .026 19 .070 .087 .124		25
20		.077 .045 16 .068 .120 .175	.027 .006 2 .027 .030 .032			.081 .021 8 .075 .104 .112		.055 .019 12 .054 .074 .085		.058 .036 38 .055 .104 .157		20
15			.026 .003 2 .026 .028 .029			.064 .013 3 .059 .075 .081				.049 .021 5 .052 .067 .080		15
10		.057 .018 2 .057 .068 .073	.026 .001 2 .026 .027 .027			.036 .016 2 .036 .046 .050	.030 .007 6 .032 .034 .036			.035 .015 12 .026 .042 .069		10
5			.031 .013 2 .031 .039 .043			.041 1				.034 .011 3 .041 .042 .043		5
0												0
5												5
10				.027 1						.027 1		10
15				.023 .004 2 .023 .025 .026						.023 .004 2 .023 .025 .026		15
20				.034 .001 2 .034 .034 .034						.034 .001 2 .034 .034 .034		20
25				.112 .071 2 .112 .160 .180						.112 .071 2 .112 .160 .180		25
30				.165 .011 2 .165 .172 .175						.165 .011 2 .165 .172 .175		30
35				.160 .065 5 .173 .218 .243						.160 .065 5 .173 .218 .243		35
40			.120 .071 57 .107 .191 .283					.221 .092 5 .232 .313 .326		.128 .078 62 .106 .217 .300		40
45S												45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E			

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JANUARY  
FL 430

	MEAN								LAT
70N									70N
65					.606 .269 5 .704 .822 898				65
60						.642 .303 33 .553 .921 1.321			60
55						.547 .236 39 .566 .761 1.058	.679 .282 70 .670 .916 1.233	.475 .191 35 .456 .671 .826	55
50				.927 .370 2 .927 1.178 1.281			.388 .239 5 .324 .614 .727	.469 .245 140 .446 .703 .946	50
45			.676 .296 21 .671 .970 1.351	.735 .365 4 .758 1.078 1.171	.375 .229 12 .393 .606 697	.494 .129 12 .493 .620 691	.445 .300 71 .342 .766 1.361	.364 .185 136 .339 .527 .795	45
40			.371 .078 5 .336 .411 .512		.500 .107 9 .510 .592 627	.325 .237 115 .255 .541 .959	.568 .251 2 .568 .739 .809	.245 .110 24 .209 .361 .470	40
35			.383 .202 23 .365 .521 .928		.260 .064 3 .243 .313 .342	.220 .125 31 .204 .327 .495			35
30		.057 .031 15 .049 .084 .123	.092 .031 24 .088 .123 .160			.156 .116 29 .094 .316 401			30
25	.116 .071 6 .081 .164 .251	.069 .002 3 .070 .070 .070						.100 .062 9 .070 .123 .243	25
20		.083 .052 16 .068 .135 .195					.062 .024 12 .059 .092 .101	.074 .044 28 .052 .115 .187	20
15									15
10		.067 .028 2 .067 .086 .094				.032 .009 6 .033 .040 .043		.041 .022 8 .035 .043 .088	10
5									5
0									0
5									5
10									10
15									15
20									20
25									25
30									30
35				.118 .060 16 .103 .188 .247				.118 .060 16 .103 .188 .247	35
40			.136 .076 57 .119 .231 .268				.261 .086 5 .284 .341 .362	.146 .084 62 .124 .238 .323	40
45S									45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
	LONGITUDE								

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JANUARY  
FL 450

	MEAN								LAT
70N									70N
65				.832 .309 .5 .841 1.126 1.209				.832 .309 .5 .841 1.126 1.209	65
60					.747 .378 .33 .705 .939 1.656			.747 .378 .33 .705 .939 1.656	60
55					.612 .276 .39 .567 .867 1.263	.817 .398 .69 .786 1.109 1.657	.555 .244 .35 .534 .848 1.037	.697 .354 .143 .622 .971 1.591	55
50							.573 .272 .140 .555 .811 1.143	.573 .272 .140 .555 .811 1.143	50
45		.761 .323 .19 .655 1.032 1.399		.380 .228 .12 .432 .590 .742	.516 .146 .12 .495 .618 .792	.444 .227 .65 .403 .682 .933	.445 .222 .135 .407 .663 .988	.470 .246 .243 .432 .732 1.009	45
40					.365 .267 .112 .296 .648 1.037		.303 .135 .24 .290 .410 .611	.354 .250 .136 .265 .588 1.036	40
35		.383 .266 .21 .287 .487 1.134			.264 .172 .27 .245 .458 .666			.316 .226 .48 .191 .477 1.004	35
30	.074 .049 .15 .062 .101 .187	.105 .036 .24 .103 .144 .169			.176 .147 .29 .107 .352 .511			.129 .110 .68 .084 .175 .457	30
25									25
20	.109 .070 .10 .111 .184 .220					.062 .025 .12 .060 .083 .107		.083 .056 .22 .063 .137 .212	20
15									15
10	.079 .037 .2 .079 .103 .114				.031 .011 .6 .035 .040 .042			.043 .029 .8 .039 .042 .105	10
5									5
0									0
5									5
10									10
15									15
20									20
25									25
30									30
35									35
40		.149 .097 .57 .128 .231 .412				.299 .065 .5 .299 .358 .368		.162 .103 .62 .130 .271 .412	40
45S									45S

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JANUARY  
FL 470

	MEAN										LAT
70N											70N
65					1.163	.248	5				65
60					.980	1.441	1.520				60
55						.913	.380	.33			55
50						.803	1.343	1.731			50
45						.723	.338	.39	.958	.457	45
40						.652	1.037	1.499	.893	1.433	40
35									.688	.321	35
30									.585	.991	30
25											25
20									.674	.324	20
15									.620	1.010	15
10											10
5											5
0											0
5											5
10											10
15											15
20											20
25											25
30											30
35											35
40											40
45S											45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JANUARY  
FL 490

MEAN											LAT
70N											70N
65					1.337 .489 5 1.323 1.862 1.863					1.337 .489 5 1.323 1.862 1.863	65
60						1.161 .440 33 1.151 1.554 2.114				1.161 .440 33 1.151 1.554 2.114	60
55						.809 .385 39 .739 1.157 1.622	1.031 .499 69 1.054 1.413 1.935	.772 .337 35 .695 1.079 1.500		.907 .450 143 .823 1.385 1.871	55
50								.755 .346 140 .715 1.090 1.523		.755 .346 140 .715 1.090 1.523	50
45		.990 .338 18 .900 1.435 1.530		.494 .211 12 .541 .707 .758		.704 .263 12 .780 1.010 1.105	.651 .346 65 .562 .985 1.486	.610 .317 135 .573 .922 1.304		.648 .337 242 .481 1.000 1.483	45
40						.465 .317 112 .400 .707 1.507		.414 .180 24 .376 .608 .733		.456 .298 136 .361 .690 1.362	40
35		.544 .399 21 .412 .849 1.597				.332 .269 27 .229 .744 .915				.425 .348 48 .246 .784 1.358	35
30	.133 .130 15 .096 .157 .462	.143 .049 24 .141 .181 .250				.251 .250 29 .166 .334 .961				.187 .185 68 .129 .268 .680	30
25											25
20	.149 .102 10 .130 .286 .294						.084 .044 12 .077 .092 .193			.114 .083 22 .074 .203 .294	20
15											15
10	.111 .046 2 .111 .142 .155					.045 .020 6 .052 .058 .067				.062 .040 6 .054 .068 .145	10
5											5
0											0
5											5
10											10
15											15
20											20
25											25
30											30
35											35
40		.187 .120 57 .167 .282 .405					.533 .204 5 .490 .770 .772			.215 .160 62 .173 .316 .771	40
45S											45S
LONGITUDE											



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JANUARY  
FL 510

	MEAN										LAT
70N											70N
65					1.577 .617 .5					1.577 .617 .5	65
60					1.513 2.121 2.547					1.513 2.121 2.547	60
55						1.310 .431 .33				1.310 .431 .33	55
50						1.305 1.690 2.178				1.305 1.690 2.178	50
45							960 .431 .39	1.204 .539 .69	.889 .400 .35	1.060 .500 .143	45
40							.922 1.465 1.875	1.255 1.716 2.167	.796 1.381 1.794	.999 1.572 2.061	40
35									.884 .392 .140	.884 .392 .140	35
30									.861 1.338 1.648	.861 1.338 1.648	30
25											25
20											20
15											15
10											10
5											5
0											0
5											5
10											10
15											15
20											20
25											25
30											30
35											35
40											40
45S											45S
15E	60E	105E	150E	165W	120W	75W	30W	15E			
LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JANUARY  
FL 530

		MEAN										LAT	
70N													70N
65					1.601 .554 .5							1.601 .554 .5	65
60					1.970 2.073 2.092							1.970 2.073 2.092	60
55						1.588 .439 .32						1.588 .439 .32	55
50						1.644 1.991 2.446						1.644 1.991 2.446	50
45						1.177 .433 .39		1.387 .564 .69	1.218 .505 .35			1.288 .526 .143	45
40						1.147 1.503 2.290		1.285 1.978 2.372	1.214 1.820 2.097			1.209 1.870 2.331	40
35									1.088 .440 .140			1.088 .440 .140	35
30									1.035 1.505 2.023			1.035 1.505 2.023	30
25													25
20													20
15													15
10													10
5													5
0													0
5													5
10													10
15													15
20													20
25													25
30													30
35													35
40													40
45S													45S
15E	60E	105E	150E	165W	120W	75W	30W	15E					

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JANUARY  
FL 550

	MEAN								LAT
70N									70N
65				1.854 .296 5 1.849 2.102 2.318				1.854 .296 5 1.849 2.102 2.318	65
60					1.780 .475 32 1.764 2.270 2.760			1.780 .475 32 1.764 2.270 2.760	60
55					1.357 .526 39 1.304 1.803 2.447	1.661 .580 68 1.707 2.243 2.744	1.474 .519 35 1.416 2.038 2.527	1.531 .566 142 1.209 2.162 2.737	55
50							1.307 .448 140 1.296 1.752 2.262	1.307 .448 140 1.296 1.752 2.262	50
45		1.733 .527 18 1.701 2.310 2.589		1.987 .412 12 1.008 1.265 1.795	1.287 .622 12 1.298 1.751 2.575	1.156 .554 65 1.005 1.822 2.174	1.087 .428 135 1.090 1.480 1.964	1.158 .513 242 1.983 1.704 2.380	45
40					.881 .449 113 .789 1.260 2.152		.830 .343 24 .814 1.207 1.465	.872 .432 137 .808 1.230 2.143	40
35		.856 .455 21 .716 1.378 1.925			.629 .314 27 .574 .933 1.312			.729 .399 48 .503 1.161 1.716	35
30	.371 .303 15 .260 .660 1.054	.371 .248 24 .283 .573 1.023			.516 .360 29 .352 .815 1.412			.433 .320 68 .245 .711 1.327	30
25									25
20	.247 .175 10 .207 .456 .548					.181 .067 12 .162 .254 .280		.211 .132 22 .159 .278 .528	20
15									15
10	.181 .083 2 .181 .224 .241				.083 .025 6 .081 .101 .124			.108 .057 8 .093 .126 .228	10
5									5
0									0
5									5
10									10
15									15
20									20
25									25
30									30
35									35
40		.444 .170 57 .425 .642 .754				.800 .313 5 .787 1.075 1.258		.473 .210 62 .420 .679 .945	40
45S									45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
	LONGITUDE								

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JANUARY  
FL 570

										LAT			MEAN			LAT		
70N																		70N
65						2.125 .402 5 2.129 2.426 2.625										2.125 .402 5 2.129 2.426 2.625		65
60								2.071 .517 31 2.013 2.756 2.949								2.071 .517 31 2.013 2.756 2.949		60
55								1.718 .522 38 1.738 2.188 2.676	1.963 .634 67 1.946 2.624 3.015	1.775 .577 35 1.685 2.564 2.875					1.649 .602 140 1.582 2.549 2.947		55	
50										1.557 .484 140 1.514 1.996 2.604					1.557 .484 140 1.514 1.996 2.604		50	
45				2.035 .592 18 1.987 2.611 2.854			1.315 .378 12 1.386 1.605 1.860	1.600 .624 12 1.590 1.934 2.927	1.407 .612 65 1.304 2.084 2.517	1.321 .448 135 1.322 1.771 2.271					1.411 .548 242 1.221 1.947 2.810		45	
40								1.176 .468 113 1.142 1.562 2.379			1.031 .392 24 1.036 1.421 1.701				1.151 .459 137 1.123 1.533 2.374		40	
35				1.077 .401 21 1.022 1.561 1.883				.915 .384 27 .945 1.327 1.592							.986 .400 48 .889 1.411 1.818		35	
30		.497 .371 14 .375 .792 1.416		.547 .375 24 .424 .734 1.589				.676 .423 29 .543 1.017 1.728							.592 .403 67 .432 .994 1.621		30	
25																		25
20		.324 .190 10 .290 .546 .638								.266 .130 12 .216 .391 .525					.292 .163 22 .214 .491 .621		20	
15																		15
10		.221 .073 2 .221 .271 291						.150 .082 6 .135 .255 .256							.168 .086 8 .135 .256 .289		10	
5																		5
0																		0
5																		5
10																		10
15																		15
20																		20
25																		25
30																		30
35																		35
40				.597 .209 57 .526 .654 1.062						1.108 .350 5 1.181 1.354 1.479					.639 .264 62 .545 .683 1.267		40	
45S																		45S
		15E	60E	105E	150E	165W	120W	75W	30W	15E								
LONGITUDE																		

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JANUARY  
FL 590

									MEAN	LAT
70N										70N
65					2.497 .626 5 2.459 3.121 3.221				2.497 .626 5 2.459 3.121 3.221	65
60						2.311 .547 31 2.211 2.865 3.279			2.311 .547 31 2.211 2.865 3.279	60
55						1.990 .534 37 2.032 2.357 3.097	2.245 .623 67 2.216 2.993 3.247	1.980 .603 35 2.067 2.597 3.077	2.110 .609 139 2.139 2.738 3.211	55
50								1.824 .530 140 1.824 2.281 2.995	1.824 .530 140 1.824 2.281 2.995	50
45		2.272 .605 18 2.356 2.958 3.118		1.693 .346 12 1.735 2.057 2.120	1.886 .716 12 1.616 2.569 3.193	1.692 .631 65 1.638 2.417 2.781	1.601 .471 135 1.604 2.035 2.550	1.694 .567 242 1.520 2.289 2.957	1.694 .567 242 1.520 2.289 2.957	45
40					1.472 .472 113 1.522 1.885 2.493		1.248 .467 24 1.182 1.674 2.144	1.432 .478 137 1.446 1.874 2.418	1.432 .478 137 1.446 1.874 2.418	40
35		1.347 .404 21 1.242 1.779 2.090			1.216 .407 27 1.123 1.673 1.917			1.273 .411 48 1.046 1.698 2.064	1.273 .411 48 1.046 1.698 2.064	35
30	.555 .266 13 .524 .744 1.171	850 .475 24 726 1.321 1.975			904 .475 29 796 1.381 1.927			.816 .461 66 .593 1.293 1.953	.816 .461 66 .593 1.293 1.953	30
25										25
20	.443 .211 10 .413 .658 .729					435 .201 12 372 .556 911		.438 .206 22 .302 .661 .872	.438 .206 22 .302 .661 .872	20
15										15
10	.360 .183 2 .360 .484 .535				.268 .108 6 .261 .399 .403			.281 .137 8 .281 .402 .523	.281 .137 8 .281 .402 .523	10
5										5
0										0
5										5
10										10
15										15
20										20
25										25
30										30
35										35
40		.857 .200 57 .845 1.065 1.246				1.501 .365 5 1.575 1.806 1.866		.909 .279 62 .834 1.135 1.726	.909 .279 62 .834 1.135 1.726	40
45S										45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E	
	LONGITUDE									

**CODE:**

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 190

												MEAN			LAT							
70N																						70N
65						.031 .032	.003 .033	3 .034											.031 .032	.003 .033	3 .034	65
60									.039 .041	.013 .050	27 .063								.039 .041	.013 .050	27 .063	60
55									.046 .046	.016 .056	67 .073	.045 .046	.014 .053	50 .085	.043 .039	.015 .056	29 .076		.045 .039	.015 .056	146 .078	55
50															.045 .042	.016 .061	142 .081		.045 .042	.016 .061	142 .081	50
45			.049 .046	.012 .054	21 .077		.023 .023	.007 .029	11 .033	.030 .030	.003 .033	4 .033	.049 .044	.027 .057	45 .123	.041 .041	.012 .050	116 .066	.042 .041	.018 .051	197 .083	45
40										.044 .044	.014 .057	117 .072	.054 .053	.007 .060	3 .064	.043 .041	.014 .057	28 .078	.044 .042	.014 .057	148 .072	40
35			.051 .051	.009 .061	22 .069					.026 .018	.018 .033	16 .074							.041 .044	.019 .057	38 .074	35
30		.037 .036	.013 .042	14 .068	.050 .048	.013 .064	14 .073			.033 .032	.014 .043	19 .064							.039 .037	.015 .051	47 .075	30
25	.054	1																	.054		1	25
20		.042 .041	.015 .059	10 .068				.044 .044	.028 .062	2 .070			.029 .032	.009 .036	9 .040				.037 .035	.016 .051	21 .070	20
15																						15
10		.025 .026	.012 .036	4 .040									.027 .027	.012 .038	7 .043				.026 .027	.012 .039	11 .043	10
5																						5
0																						0
5					.023		1												.023		1	5
10																						10
15																						15
20																						20
25																						25
30																						30
35					.044		1												.044		1	35
40			.041 .039	.013 .051	50 .074								.023 .023	.006 .026	2 .028				.041 .039	.014 .051	52 .074	40
45S																						45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E													
	LONGITUDE																					

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 210

	MEAN										LAT
70N											70N
65					.036 .009 3					.036 .009 3	65
60					.039 .043 .045					.039 .043 .045	60
55						.043 .014 27				.043 .014 27	55
50						.040 .052 .074				.040 .052 .074	50
45						.048 .017 67	.049 .017 50	.047 .017 29		.048 .017 146	45
40						.048 .058 .081	.047 .058 .083	.041 .067 .084		.048 .058 .083	40
35								.047 .018 144		.047 .018 144	35
30								.045 .066 .087		.045 .066 .087	30
25			.053 .014 21		.023 .008 11	.041 .013 5	.055 .031 45	.041 .013 116		.045 .020 198	25
20			.049 .055 .088		.020 .030 .040	.038 .054 .060	.046 .066 .151	.041 .051 .067		.039 .056 .089	20
15					.012 .012 2	.048 .021 122	.044 .018 13	.045 .017 28		.047 .020 155	15
10					.012 .019 .023	.047 .061 .096	.042 .057 .079	.043 .060 .084		.045 .061 .093	10
5	.050 .006 2		.084 .047 25		.038 .022 6	.029 .018 29				.045 .037 62	5
0	.050 .054 .056		.052 .067 185		.043 .050 .069	.023 .042 .071				.043 .061 .087	0
5		.040 .015 15	.050 .013 14			.033 .012 19				.040 .015 48	5
10		.039 .044 .077	.049 .059 .075			.033 .046 .053				.035 .053 .078	10
15											15
20		.043 .013 10	.026 .009 2		.018 .020 18		.028 .008 9			.027 .019 39	20
25		.043 .058 .061	.026 .032 .035		.012 .034 .066		.029 .036 .036			.027 .046 .064	25
30			.017 .012 3							.017 .012 3	30
35			.023 .026 .028							.023 .026 .028	35
40		.025 .011 4				.026 .012 7				.026 .012 11	40
45		.028 .034 .036				.031 .036 .040				.031 .037 .040	45
50											50
55											55
60		.034 1								.034 1	60
65				.022 1						.022 1	65
70											70
75											75
80											80
85											85
90				.037 1						.037 1	90
95											95
100											100
105											105
110											110
115											115
120											120
125											125
130											130
135			.068 1	.038 .024 8						.041 .024 9	135
140				.048 .055 .069						.048 .064 .071	140
145			.043 .020 50				.028 .002 2			.042 .020 52	145
150			.038 .055 .076				.028 .029 .029			.038 .055 .075	150
155											155
160											160
165											165
170											170
175											175
180											180
185											185
190											190
195											195
200											200
205											205
210											210
215											215
220											220
225											225
230											230
235											235
240											240
245											245
250											250
255											255
260											260
265											265
270											270
275											275
280											280
285											285
290											290
295											295
300											300
305											305
310											310
315											315
320											320
325											325
330											330
335											335
340											340
345											345
350											350
355											355
360											360
365											365
370											370
375											375
380											380
385											385
390											390
395											395
400											400
405											405
410											410
415											415
420											420
425											425
430											430
435											435
440											440
445											445
450											450
455											455
15E	60E	105E	150E	165W	120W	75W	30W	15E			
LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 230

	MEAN										LAT
70N											70N
65					.048 .002 3 .049 .050 .051					.048 .002 3 .049 .050 .051	65
60						.047 .021 27 .044 .061 .100				.047 .021 27 .044 .061 .100	60
55						.052 .021 67 .049 .062 .110	.057 .024 50 .051 .073 .122		.052 .022 29 .041 .081 .099	.054 .022 146 .047 .070 .115	55
50									.050 .020 143 .046 .071 .098	.050 .020 143 .046 .071 .098	50
45			.060 .023 22 .052 .076 .122		.026 .010 11 .028 .039 .040	.035 .007 4 .037 .040 .043	.059 .033 45 .049 .073 .182		.042 .014 116 .042 .052 .073	.047 .023 198 .041 .058 .108	45
40					.040 .007 2 .040 .044 .046	.050 .021 128 .048 .064 .108	.062 .013 5 .056 .074 .082		.046 .021 28 .042 .062 .095	.049 .021 163 .047 .065 .106	40
35			.061 .022 23 .054 .071 .122		.035 .027 3 .024 .057 .070	.027 .017 25 .024 .041 .065				.043 .026 51 .043 .062 .108	35
30	.039 .016 14 .039 .043 .077		.055 .019 14 .051 .078 .095			.033 .011 19 .032 .044 .047				.042 .018 47 .041 .051 .088	30
25											25
20	.045 .013 10 .044 .057 .067		.057 1		.043 .021 9 .043 .069 .070		.029 .010 9 .032 .039 .044			.040 .017 29 .036 .059 .070	20
15			.033 1							.033 1	15
10	.025 .009 4 .029 .032 .032					.027 .010 7 .034 .035 .039				.026 .010 11 .032 .035 .038	10
5											5
0	.015 1									.015 1	0
5				.021 1						.021 1	5
10											10
15				.009 1						.009 1	15
20											20
25				.047 1						.047 1	25
30			.056 1							.056 1	30
35				.050 .033 4 .049 .076 .094						.050 .033 4 .049 .076 .094	35
40			.046 .025 52 .042 .056 .081				.029 .001 2 .029 .030 .030			.045 .025 54 .041 .056 .081	40
45S											45S

15E

60E

105E

150E

165W

120W

75W

30W

15E

LONGITUDE



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 250

											MEAN			LAT												
70N																70N										
65								.049	.002	3					.049	.002	3	65								
								.048	.051	.052					.048	.051	.052									
60											.054	.033	27		.054	.033	27	60								
											.046	.064	.154		.046	.064	.154									
55											.054	.022	67	.064	.033	50	.057	.027	29	.058	.028	146	55			
											.052	.067	.119	.055	.101	.148	.045	.086	.123	.046	.083	.126				
50															.053	.023	146	.053	.023	146	.049	.073	.123	50		
															.050	.073	.123									
45								.069	.032	21	.026	.010	11	.047	.024	4	.073	.053	45	.048	.021	117	.055	.035	198	45
								.058	.096	.154	.025	.033	.046	.037	.065	.083	.056	.089	.256	.044	.063	.107	.045	.069	.158	
40											.044	.012	2	.056	.027	126	.070	.071	3	.048	.023	28	.055	.028	159	40
											.044	.052	.056	.053	.078	.130	.043	.128	.163	.046	.074	.101	.051	.078	.138	
35	.028	1						.063	.033	25	.049	.005	4	.035	.019	19							.050	.030	49	35
								.054	.071	.164	.049	.053	.055	.029	.058	.077							.049	.064	.139	
30								.044	.019	14				.034	.014	20							.044	.021	48	30
								.042	.047	.090	.051	.063	.114	.037	.042	.061							.038	.054	.101	
25																										25
20								.046	.013	10	.036	.031	8				.029	.013	9				.038	.020	30	20
								.047	.061	.065	.031	.036	.102	.031	.036	.102	.030	.041	.044				.037	.049	.085	
15								.062		1													.053	.021	3	15
																							.043	.070	.080	
10								.027	.009	4				.027	.010	7							.027	.010	11	10
								.029	.033	.037				.032	.035	.042							.029	.036	.042	
5																										5
0								.029		1													.029		1	0
5											.019		1										.019		1	5
10																										10
15											.015	.012	2										.015	.012	2	15
											.015	.023	.027										.015	.023	.027	
20																										20
25																										25
30								.006		1													.006		1	30
35								.062	.011	5	.064	.007	3										.063	.010	8	35
								.069	.071	.073	.061	.069	.073										.062	.073	.073	
40								.046	.023	50							.030	.001	2				.046	.023	52	40
								.043	.061	.090							.030	.030	.030				.042	.061	.089	
45S																										45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E																	
											LONGITUDE															

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 270

	MEAN								LAT
70N									70N
65					.059 .016 .3 .059 .073 .078				65
60					.069 .050 .27 .057 .084 .226				60
55					.063 .035 .67 .053 .084 .154	.082 .049 .50 .063 .146 .196	.063 .034 .29 .048 .096 .146	.070 .041 .146 .048 .115 .161	55
50							.059 .030 .143 .051 .083 .132	.059 .030 .143 .051 .083 .132	50
45		.080 .040 .21 .061 .119 .179		.025 .010 .11 .021 .036 .042	.070 .039 .4 .057 .106 .127	.088 .076 .45 .058 .107 .295	.054 .031 .116 .045 .076 .147	.063 .049 .197 .049 .092 .223	45
40					.067 .042 .124 .054 .104 .176	.022 .1	.054 .029 .28 .050 .089 .106	.064 .040 .153 .053 .103 .169	40
35		.077 .051 .24 .059 .092 .223		.067 .029 .4 .067 .096 .098	.035 .017 .21 .031 .054 .075			.058 .044 .49 .053 .083 .150	35
30	.050 .024 .14 .047 .058 .104	.065 .027 .16 .056 .089 .130			.037 .016 .19 .035 .044 .076			.050 .025 .49 .043 .071 .107	30
25		.031 .023 .2 .031 .047 .053		.044 .1				.035 .020 .3 .044 .051 .054	25
20	.048 .015 .10 .049 .065 .068	.010 .1		.042 .022 .24 .038 .053 .099		.032 .014 .9 .033 .042 .052		.040 .020 .44 .038 .056 .096	20
15									15
10	.030 .010 .4 .030 .039 .044				.026 .009 .7 .029 .037 .038			.028 .010 .11 .029 .037 .044	10
5									5
0		.019 .1						.019 .1	0
5		.012 .1	.018 .1					.015 .003 .2 .015 .017 .018	5
10									10
15									15
20									20
25									25
30		.045 .1						.045 .1	30
35		.038 .025 .5 .057 .059 .060	.058 .005 .4 .059 .063 .064					.047 .022 .9 .057 .061 .064	35
40		.050 .026 .51 .044 .064 .095				.031 0 .000 .2 .031 .031 .031		.049 .026 .53 .044 .064 .095	40
45S									45S

15E

60E

105E

150E

165W

120W

75W

30W

15E

LONGITUDE

CODE:

MEAN ST. DEV. N

50% 84% 98%

FEBRUARY  
FL 290

	MEAN										LAT
70N											70N
65					.086 .058 3 .056 .132 .164					.086 .058 3 .056 .132 .164	65
60						.101 .074 26 .073 .150 .368				.101 .074 26 .073 .150 .368	60
55						.079 .052 70 .059 .126 .221	.115 .073 50 .091 .202 .249	.070 .046 32 .053 .109 .201		.089 .062 152 .053 .160 .237	55
50					.052 1	.053 1		.067 .041 141 .055 .093 .228		.067 .041 143 .055 .093 .228	50
45	.049 1		.106 .056 21 .092 .185 .219		.028 .008 11 .027 .035 .041	.106 .075 5 .063 .186 .219	.110 .096 45 .067 .181 .364	.061 .045 116 .046 .098 .214		.076 .066 199 .053 .115 .340	45
40	.061 .011 2 .061 .068 .071				.060 1	.083 .064 125 .058 .137 .285	.076 .039 3 .052 .106 .129	.058 .035 29 .050 .097 .140		.078 .060 160 .054 .132 .280	40
35	.044 .035 3 .039 .074 .088		.108 .079 24 .078 .181 .321		.085 .079 10 .055 .116 .274	.056 .068 29 .034 .073 .247				.081 .077 60 .052 .111 .342	35
30	.054 .015 2 .054 .064 .068	.057 .029 15 .051 .073 .127	.071 .037 14 .066 .078 .167			.043 .022 20 .038 .057 .098				.055 .031 51 .048 .073 .136	30
25	.073 .022 3 .073 .097 .106		.050 1		.041 .017 6 .040 .052 .071					.054 .025 10 .044 .075 .101	25
20		.050 .017 11 .047 .069 .073	.048 .015 5 .040 .064 .069		.034 .021 13 .025 .051 .074		.031 .010 9 .029 .041 .048			.040 .019 38 .021 .061 .075	20
15					.031 .010 9 .030 .042 .051					.031 .010 9 .030 .042 .051	15
10		.032 .011 6 .032 .038 .050	.040 1	.072 1	.056 1	.028 .012 7 .027 .042 .046				.034 .016 16 .022 .050 .067	10
5		.029 .003 2 .029 .030 .031								.029 .003 2 .029 .030 .031	5
0		.026 1								.026 1	0
5			.021 1	.017 1						.019 .002 2 .019 .020 .021	5
10			.017 .001 2 .017 .018 .018							.017 .001 2 .017 .018 .018	10
15			.029 .012 4 .029 .040 .046	.020 1						.027 .012 5 .025 .037 .046	15
20			.025 1							.025 1	20
25				.031 1						.031 1	25
30		.054 1	.057 .021 3 .052 .074 .084	.064 .012 4 .064 .075 .077						.060 .016 8 .044 .077 .084	30
35			.036 .031 2 .036 .056 .065	.064 .024 10 .062 .088 .108						.059 .028 12 .057 .088 .107	35
40			.055 .035 51 .044 .081 .162				.032 0.000 2 .032 .032 .032			.055 .035 53 .042 .079 .162	40
45S											45S

15E

60E

105E

150E

165W

120W

75W

30W

15E

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 310

															MEAN			LAT																			
70N																									70N												
65									.164 .090 3 .145 .236 .277												.164 .090 3 .145 .236 .277				65												
60													.151 .106 26 .123 .265 .402				.053 .008 7 .051 .056 .069				.056 .005 6 .059 .059 .060				.116 .098 39 .068 .195 .372				60								
55													.103 .078 67 .069 .162 .290				.160 .107 54 .143 .295 .345				.087 .066 35 .060 .134 .269				.119 .092 156 .068 .234 .327				55								
50																					.086 .061 155 .063 .133 .282				.086 .061 155 .063 .133 .282				50								
45	.069 .014 4 .073 .080 .084				.152 .080 21 .136 .249 .290								.031 .017 11 .026 .040 .072				.142 .079 13 .114 .233 .318				.146 .115 45 .115 .260 .435				.082 .064 120 .059 .142 .276				.103 .086 214 .058 .173 .343				45				
40	.064 .019 3 .074 .079 .081								.071 .024 3 .064 .091 .101				.103 .085 6 .069 .172 .258				.104 .087 135 .072 .174 .363				.091 .046 3 .061 .126 .153				.072 .049 28 .066 .113 .198				.098 .081 178 .065 .159 .346				40				
35	.066 .010 2 .066 .072 .075								.131 .110 32 .084 .259 .399				.089 .025 2 .089 .106 .113				.046 .016 17 .044 .061 .082				.066 .068 23 .036 .100 .262								.090 .089 76 .051 .125 .386				35				
30					.068 .041 18 .055 .086 .173				.079 .050 14 .071 .077 .209								.096 .083 11 .068 .131 .293				.051 .039 20 .045 .058 .162								.070 .054 63 .055 .077 .245				30				
25	.068 .010 7 .067 .075 .085				.070 .034 10 .061 .071 .152				.059 .019 4 .061 .075 .083				.073 1				.054 .020 13 .059 .066 .088												.063 .024 35 .062 .074 .115				25				
20					.049 .016 17 .046 .066 .078				.038 .004 4 .038 .041 .044								.037 .027 22 .030 .062 .096				.034 .009 9 .031 .043 .046								.040 .021 52 .021 .062 .080				20				
15					.027 .012 4 .030 .037 .039				.018 .018 2 .018 .029 .034								.039 .021 14 .029 .065 .076												.034 .021 20 .026 .059 .075				15				
10					.042 .013 4 .041 .053 .060								.033 .022 16 .026 .058 .084				.035 .015 7 .027 .052 .059				.027 .010 7 .028 .036 .040								.033 .018 34 .021 .055 .072				10				
5									.028 .019 17 .024 .040 .077																				.028 .019 17 .024 .040 .077				5				
0					.019 1				.057 1				.024 .018 18 .020 .040 .067																.026 .019 20 .020 .053 .067				0				
5									.030 1				.021 .010 16 .017 .034 .039																.022 .010 17 .017 .034 .039				5				
10									.044 .015 2 .044 .053 .057				.026 .016 7 .020 .044 .049																.030 .017 9 .029 .048 .057				10				
15									.031 .015 2 .031 .041 .045				.021 .012 7 .021 .028 .039																.023 .013 9 .021 .037 .045				15				
20	.048 .008 2 .049 .054 .057				.049 1				.048 .017 2 .049 .060 .064				.019 .010 6 .017 .027 .036																.033 .018 11 .032 .052 .063				20				
25	.054 .030 5 .037 .072 .109								.073 .023 2 .073 .088 .094				.034 .005 2 .034 .037 .038																.054 .028 9 .038 .082 .111				25				
30									.081 .019 5 .094 .096 .097				.031 .015 4 .033 .046 .047																.059 .030 9 .051 .095 .097				30				
35									.051 .011 3 .050 .060 .064				.056 .023 16 .057 .077 .097																.055 .022 19 .055 .076 .096				35				
40					.055 .033 52 .045 .083 .136																.040 .007 2 .040 .044 .046								.054 .033 54 .045 .079 .155				40				
45S																																					45S
15E		60E		105E		150E		165W		120W		75W		30W		15E																					
																				LONGITUDE																	

MEAN	ST. DEV.	N
50%	84%	98%

[illegible]51

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 350

															MEAN					LAT	
LAT																		LAT			
70N																		70N			
65																		65			
60																		60			
55																		55			
50																		50			
45																		45			
40																		40			
35																		35			
30																		30			
25																		25			
20																		20			
15																		15			
10																		10			
5																		5			
0																		0			
5																		5			
10																		10			
15																		15			
20																		20			
25																		25			
30																		30			
35																		35			
40																		40			
45S																		45S			

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 370

	MEAN										LAT
70N								.311	1		70N
65					.567 .093 .50	.551 .098 .11	.356	1	.333 .020 .4	.547 .109 .66	65
60				.314 .121 .9	.527 .148 .47	.417 .192 .47			.323 .346 .364	.545 .643 .764	60
55				.318 .451 .469	.550 .678 .739	.439 .575 .739			.213 .110 .4	.449 .185 .107	55
50				.358 .180 .53	.404 .208 .24	.348 .175 .80	.450 .172 .57	.335 .180 .39	.376 .185 .253		50
45	.388	1		.322 .526 .720	.423 .567 .851	.350 .538 .653	.465 .624 .764	.360 .505 .626	.388 .566 .757		45
40				.465 .241 .27	.400 .152 .21	.428 .106 .8	.155 .173 .15	.278 .172 .168	.307 .194 .239		40
35				.489 .672 .882	.424 .538 .655	.427 .496 .584	.037 .359 .497	.268 .459 .657	.302 .504 .690		35
30				.433 .188 .22	.406 .149 .27	.312 .228 .44	.353 .146 .16	.307 .225 .62	.252 .164 .127	.305 .198 .293	30
25				.420 .616 .807	.379 .607 .661	.282 .561 .812	.404 .473 .508	.245 .425 .576	.284 .516 .737		25
20	.327 .100 .6			.360 .149 .12	.419 .161 .19	.254 .154 .23	.252 .169 .291	.207 .175 .15	.286 .171 .44	.266 .172 .410	20
15	.341 .381 .482			.322 .526 .611	.369 .570 .736	.236 .424 .510	.219 .445 .637	.155 .450 .493	.257 .470 .592	.233 .462 .630	15
10	.190 .136 .7			.261 .135 .49	.180 .125 .26	.118 .114 .99	.164 .130 .92	.533 .019 .4	.172 .142 .277	.117 .104 .208	10
5	.078 .101 .116			.243 .389 .575	.139 .295 .480	.080 .173 .463	.122 .300 .458	.525 .549 .562	.117 .119 .316	.063 .193 .390	5
0				.080 .024 .5	.077 .035 .16	.094 .075 .27	.117 .076 .21	.138 .122 .119	.066 .033 .20	.117 .104 .208	0
5				.074	.064 .109 .160	.072 .119 .298	.086 .227 .271	.095 .299 .442	.064 .100 .133	.063 .119 .390	5
10				.058 .001 .3	.061 .007 .7	.117 .060 .6	.076 .057 .94			.079 .055 .111	10
15				.057 .059 .060	.059 .063 .075	.084 .179 .222	.076 .122 .246			.070 .119 .243	15
20				.068 .038 .15	.116 .105 .3		.063 .051 .24	.044 .021 .2	.045 .015 .9	.064 .050 .53	20
25				.057 .106 .144	.043 .193 .255		.050 .102 .189	.044 .057 .063	.042 .065 .072	.049 .102 .240	25
30				.031 .004 .4	.013 .015 .4		.027 .020 .24			.026 .018 .32	30
35				.033 .035 .035	.006 .023 .036		.025 .035 .080			.025 .035 .073	35
40				.049 .026 .6	.016	.020 .005 .11	.025 .015 .18	.038 .014 .7		.029 .018 .43	40
45				.044 .076 .089		.020 .024 .030	.022 .033 .065	.034 .040 .068		.029 .039 .075	45
50				.024 .008 .3		.021 .009 .23	.041 .010 .3			.023 .011 .28	50
55				.024 .031 .034		.021 .029 .040	.037 .049 .054			.023 .034 .049	55
60						.018 .009 .23	.039 .013 .4			.022 .012 .27	60
65						.020 .028 .031	.034 .049 .060			.024 .029 .049	65
70						.022 .013 .24	.031 .006 .2			.023 .013 .28	70
75						.023 .033 .049	.031 .035 .037			.023 .033 .049	75
80						.018 .003 .3	.019 .009 .18			.022 .014 .23	80
85						.017 .021 .023	.019 .027 .035			.022 .028 .058	85
90						.036 .014 .6	.025 .012 .7	.085	1	.034 .019 .14	90
95						.035 .051 .055	.024 .041 .045			.024 .050 .077	95
100	.035 .004 .3			.051 .017 .7	.075 .016 .2					.049 .020 .13	100
105	.035 .038 .043			.044 .062 .061	.075 .085 .089					.040 .063 .089	105
110				.030 .003 .5	.046 .013 .6	.052 .011 .3				.041 .014 .14	110
115				.030 .032 .033	.049 .055 .060	.046 .061 .067				.032 .054 .066	115
120				.045 .001 .2	.066 .037 .6	.040 .003 .4				.054 .029 .12	120
125				.045 .046 .046	.055 .102 .127	.041 .043 .043				.043 .074 .122	125
130						.097 .036 .14	.123 .086 .3			.101 .050 .17	130
135						.086 .131 .169	.092 .193 .234			.087 .134 .221	135
140						.082 .046 .51	.142	1		.083 .045 .54	140
145						.069 .119 .197			.090 .013 .2	.083 .119 .196	145
150											150

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 390

															MEAN			LAT																		
70N																70N																				
65													.646	.310	2	.636	.188	81	.620	1		.636	.191	84												
													.646	.856	.943	.631	.849	.983				.627	.854	.982												
60													.642	.177	54	.543	.176	47	.521	.205	27	.514	.029	3	.455	.056	8									
													.653	.824	.682	.504	.716	.775	.544	.677	.946	.534	.535	.535	.469	.512	.522									
55													.618	.208	62	.552	.182	18	.427	.194	68	.568	.210	57	.438	.180	40									
													.607	.827	1.044	.569	.703	.872	.451	.614	.752	.541	.781	.979	.456	.588	.780									
50													.687	.279	29	.472	.275	19				.486	.194	8	.348	.204	196									
													.809	.994	1.091	.380	.738	1.098				.552	.678	.693	.332	.553	.707									
45	.463	.080	9											.623	.250	27	.301	.182	36	.389	.136	13	.481	.270	51	.341	.193	122								
	.461	.349	.576											.615	.924	1.080	.431	.779	1.006	.341	.540	.633	.468	.736	1.095	.339	.518	.762								
40	.466	.089	7											.661	.209	16	.380	.280	34	.313	.210	228	.596	1		.302	.185	35								
	.482	.548	.549											.744	.833	.926	.324	.532	1.210	.276	.535	.792				.265	.429	.742								
35													.308	.192	35	.160	.127	33	.165	.153	40	.203	.184	55				.208	.177	163						
													.263	.442	.782	.113	.335	.440	.096	.328	.595	.113	.401	.722				.123	.387	.725						
30													.089	.046	14	.082	.039	21	.068	.012	4	.138	.104	53	.075	.028	20				.107	.082	112			
													.074	.127	.181	.070	.122	.171	.064	.077	.086	.038	.212	.364	.071	.102	.132				.059	.188	.346			
25													.051	.024	3	.100	.045	4	.082	.056	35										.081	.054	43			
													.065	.069	.071	.064	.137	.169	.069	.145	.193										.070	.144	.191			
20													.094	.047	10	.026	.014	7	.052	.043	9				.049	.015	9				.058	.042	35			
													.091	.123	.192	.030	.038	.043	.049	.091	.134				.042	.067	.077				.044	.095	.162			
15													.019	.013	8	.034	.023	2													.022	.016	10			
													.017	.036	.039	.034	.049	.055													.017	.039	.053			
10													.069	.022	4	.041	.005	4	.057	1		.039	.014	7							.048	.020	16			
													.064	.090	.100	.040	.045	.048				.034	.046	.067				.040	.065	.094						
5													.035	.004	2	.037	.011	2	.001	.000	2										.024	.018	6			
													.035	.038	.039	.037	.044	.047	.001	.001	.001										.016	.041	.046			
0													.039	1					.040	1										.040	.001	2				
																												.040	.040	.040						
5													.030	1	.023	1	.037	.011	2	.032	.009	2										.032	.009	6		
																.037	.044	.047	.032	.037	.040										.027	.041	.046			
10													.019	.005	2	.057	1		.029	.003	2										.030	.014	5			
													.019	.022	.024				.029	.030	.031										.026	.040	.055			
15													.022	1					.052	.007	4										.046	.014	5			
																			.049	.057	.063										.047	.055	.063			
20																0.000	1		.057	.018	5										.048	.027	6			
																			.044	.076	.085										.044	.073	.084			
25													.003	.003	2	.043	.013	6													.033	.021	8			
													.003	.004	.005	.050	.052	.053													.043	.052	.053			
30													.060	.024	4	.091	.007	2	.053	1													.078	.037	13	
													.060	.085	.088	.091	.096	.098	.082	.118	.171										.081	.098	.160			
35													.087	.034	9	.129	.062	13													.112	.056	22			
													.068	.114	.156	.115	.186	.243													.081	.174	.234			
40													.095	.052	51																.096	.051	53			
													.093	.124	.198																.094	.127	.198			
45S																																				
15E	60E	105E	150E	165W	120W	75W	30W	15E																												
LONGITUDE																																				





**CODE:**

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 430

											MEAN		LAT								
70N														70N							
65						1.234	.165	3					1.234	.165	3	65					
60						1.211	1.371	1.438					1.211	1.371	1.438	60					
										.777	.263	.27		.777	.263	.27					
										.742	.906	1.465		.742	.906	1.465					
55										.629	.254	.68	.837	.354	.51	.645	.269	.28	.704	.311	.147
										.638	.913	1.097	.776	1.181	1.548	.645	.891	1.095	.683	.958	1.449
50						1.037	.372	3					.756	.112	3	.526	.263	.167	.538	.273	.173
						1.272	1.309	1.325					.825	.839	.844	.501	.786	1.196	.511	.822	1.262
45						.803	.281	.26		.328	.194	.11	.776	.419	.4	.609	.266	.47	.516	.256	.116
						.819	1.051	1.255		.284	.514	.693	.655	1.127	1.411	.598	.810	1.246	.472	.787	1.068
40						.661	.215	.17		.170	.053	.5	.467	.282	.117				.400	.202	.28
						.722	.579	.936		.168	.208	.254	.406	.736	1.254				.360	.627	.782
35						.351	.265	.27		.588	.065	.4	.289	.226	.14				.353	.254	.45
						.296	.626	.982		.584	.650	.669	.263	.517	.786				.296	.625	.902
30						.123	.082	.14		.332	.151	.3	.112	.063	.19				.120	.091	.35
						.094	.216	.303		.405	.449	.466	.098	.142	.272				.082	.167	.397
25										.040	.018	.9							.040	.018	.9
										.030	.064	.070							.030	.064	.070
20						.106	.069	.10		.032	.013	.4				.050	.015	.9	.071	.056	.23
						.085	.140	.253		.029	.044	.051				.053	.057	.077	.054	.120	.218
15										.013		1							.013		1
10						.080	.026	.4		.017	.003	.2		.044	.019	.7			.051	.030	.13
						.070	.100	.121		.017	.018	.019		.037	.073	.074			.037	.074	.112
5										.028	.001	.2							.028	.001	.2
										.028	.029	.029							.028	.029	.029
0																					
5										.050		1							.050		1
10																					
15																					
20																					
25																					
30																					
35										.186	.018	3							.166	.018	3
										.198	.199	.199							.198	.199	.199
40						.126	.077	.50								.140	.064	.2	.127	.076	.52
						.119	.191	.324								.140	.184	.201	.119	.195	.321
45S																					
15E	60E	105E	150E	165W	120W	75W	30W	15E													

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 450

	MEAN										LAT
70N											70N
65					1.234 .287 3 1.190 1.472 1.588					1.234 .287 3 1.190 1.472 1.588	65
60						.904 .341 .27 .812 1.349 1.716				.904 .341 .27 .812 1.349 1.716	60
55						.692 .305 .68 .664 .999 1.402	.971 .433 .50 969 1.381 1.953	.762 .327 .28 .802 1.095 1.288		.801 .379 .146 .576 1.139 1.652	55
50								.606 .306 .169 .594 .951 1.292		.606 .306 .169 .594 .951 1.292	50
45			.895 .298 .21 .920 1.221 1.409		.447 .271 .11 .355 .730 .983	1.048 .473 .4 .964 1.475 1.722	.682 .311 .45 .641 .987 1.407	.588 .307 .116 .554 .884 1.216		.644 .332 .197 .605 .985 1.406	45
40					.243 1	.495 .290 .117 .441 .788 1.226		.427 .246 .28 .406 .674 .960		.480 .283 .146 .401 .778 1.216	40
35			.360 .260 .22 .281 .643 .951		.240 .026 .2 .240 .257 .264	.280 .210 .14 .256 .486 .687				.324 .239 .38 .204 .512 .911	35
30	.140 .101 .14 .105 .252 .369		.133 .080 .14 .103 .198 .314			.115 .049 .19 .120 .154 .211				.128 .078 .47 .104 .190 .339	30
25											25
20	.114 .080 .10 .090 .154 .285						.048 .015 .9 .048 .065 .070			.083 .067 .19 .058 .146 .256	20
15											15
10	.087 .031 .4 .077 .115 .133					.049 .015 .7 .040 .071 .074				.063 .029 .11 .059 .082 .127	10
5											5
0											0
5				.060 1						.060 1	5
10											10
15											15
20											20
25											25
30											30
35											35
40			.138 .078 .50 .123 .217 .322				.243 .150 .2 .243 .345 .387			.142 .084 .52 .123 .220 .392	40
45S											45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 470

		MEAN										LAT
70N												70N
65					1.229 .409 3 1.067 1.559 1.761						1.229 .409 3 1.067 1.559 1.761	65
60						1.050 .429 27 .934 1.558 2.075					1.050 .429 27 .934 1.558 2.075	60
55						.836 .366 68 .796 1.257 1.598	1.098 .460 30 1.100 1.547 2.152	.875 .398 28 .818 1.374 1.534		.933 .424 146 .699 1.393 1.867		55
50								.697 .378 170 .624 1.141 1.563		.697 .378 170 .624 1.141 1.563		50
45			.993 .305 21 .976 1.254 1.546		.630 .449 11 .436 .953 1.624	1.032 .367 4 .938 1.359 1.572	.774 .389 45 .772 1.091 1.632	.637 .379 116 .557 .987 1.771		.714 .397 197 .649 1.087 1.753		45
40						.577 .323 117 .498 .843 1.455		.493 .255 27 .497 .751 1.019		.561 .313 144 .459 .842 1.419		40
35			.413 .252 22 .345 .666 .906			.323 .229 14 .299 .539 .765				.378 .247 36 .236 .658 .893		35
30		.161 .110 14 .132 .320 .366	.131 .061 13 .116 .200 .250			.112 .043 19 .106 .144 .204				.132 .077 46 .104 .196 .364		30
25												25
20		.123 .091 10 .098 .166 .319					.053 .020 9 .052 .071 .090			.090 .078 19 .059 .155 .287		20
15												15
10		.104 .042 4 .102 .145 .156				.058 .015 7 .062 .076 .078				.074 .038 11 .062 .100 .152		10
5												5
0												0
5				.062 1						.062 1		5
10												10
15												15
20												20
25												25
30												30
35												35
40			.164 .091 50 .143 .268 .372				.297 .165 2 .297 .408 .454			.169 .098 52 .143 .271 .391		40
45S												45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E			

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 490

	MEAN								LAT
70N									70N
65				1.427 .326 .3				1.427 .326 .3	65
60				1.259 1.683 1.858				1.259 1.683 1.858	60
55					1.183 .425 .27			1.183 .425 .27	55
50					1.107 1.760 1.887			1.107 1.760 1.887	50
45					.957 .366 .68	1.260 .499 .50	1.047 .471 .28	1.078 .457 .146	45
40					.928 1.305 1.740	1.222 1.691 2.581	1.033 1.595 1.817	.779 1.515 2.222	40
35							.757 .399 .170	.757 .399 .170	35
30							.653 1.167 1.611	.653 1.167 1.611	30
25									25
20									20
15									15
10									10
5									5
0									0
5				.065	1			.065	5
10									10
15									15
20									20
25									25
30									30
35									35
40									40
45S									45S
15E	60E	105E	150E	165W	120W	75W	30W	15E	
LONGITUDE									

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 510

		MEAN										LAT
70N												70N
65					1.637	.348	3					65
					1.561	1.925	2.075					
60								1.298	.476	27		60
								1.282	1.745	2.269		
55								1.125	.370	68		55
								1.106	1.484	1.927		
50												50
45			1.220	.428	21			.657	.344	11		45
			1.293	1.549	2.125			.518	.964	1.379		
40								.816	.430	117		40
								.735	1.246	1.906		
35			.689	.453	21			.466	.333	14		35
			.581	1.340	1.608			.330	.925	1.009		
30		.210	.150	.14		.176	.094	.13				30
		.163	.285	.548		.143	.251	.393				
25												25
20		.156	.109	.10								20
		.130	.213	.392								
15												15
10		.136	.070	.4				.070	.028	7		10
		.145	.204	.208				.060	.103	.114		
5												5
0												0
5					.067	1						5
10												10
15												15
20												20
25												25
30												30
35												35
40			.246	.094	.50			.379	.170	2		40
			.252	.350	.425			.379	.495	.542		
45S												45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E			

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 530

	MEAN								LAT
70N									70N
65				1.934 .341 3 1.744 2.199 2.386				1.934 .341 3 1.744 2.199 2.386	65
60					1.403 .471 27 1.304 1.777 2.456			1.403 .471 27 1.304 1.777 2.456	60
55					1.305 .397 68 1.279 1.686 2.140	1.608 .661 50 1.531 2.216 3.099	1.264 .534 28 1.258 1.692 2.472	1.401 .548 146 1.041 1.941 2.774	55
50							.976 .485 172 .915 1.453 2.149	.976 .485 172 .915 1.453 2.149	50
45		1.370 .566 21 1.209 2.004 2.543		.978 .532 11 .823 1.511 2.045	1.638 .478 4 1.608 2.016 2.300	1.123 .627 45 .963 1.576 2.633	1.024 .510 116 1.001 1.389 2.295	1.094 .562 157 1.035 1.598 2.507	45
40					.956 .502 117 .893 1.464 2.193		.911 .395 27 .820 1.154 1.883	.947 .484 144 .813 1.435 2.222	40
35		.841 .499 21 .677 1.349 1.922			.642 .483 14 .517 1.074 1.704			.761 .502 35 .631 1.116 1.953	35
30	.244 .175 14 .185 .370 .642	.263 .208 13 .178 .466 .746			.257 .173 19 .201 .446 .677			.254 .184 46 .169 .452 .786	30
25									25
20	.192 .102 10 .164 .225 .425					.088 .025 9 .081 .106 .136		.143 .092 19 .114 .193 .382	20
15									15
10	.154 .087 4 .164 .238 .247				.088 .035 7 .067 .133 .142			.112 .067 11 .101 .177 .244	10
5									5
0									0
5			.069 1					.069 1	5
10									10
15									15
20									20
25									25
30									30
35									35
40		.313 .117 50 .307 .431 .537				.543 .295 2 .543 .744 .826		.322 .136 52 .307 .433 .612	40
45S									45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
	LONGITUDE								

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 550

											MEAN			LAT					
70N														70N					
65					2.332	.325	3						2.332	.325	3	65			
					2.129	2.578	2.764						2.129	2.578	2.764				
60								1.769	.583	26				1.769	.583	26	60		
								1.728	2.122	3.227				1.728	2.122	3.227			
55								1.580	.438	68	1.865	.692	50	1.659	.585	146	55		
								1.662	2.033	2.442	1.812	2.506	3.095	1.297	2.193	3.015			
50													1.201	.539	172		50		
													1.170	1.767	2.529	1.170	1.767	2.529	
45			1.619	.569	.21			1.251	.478	.11	1.919	.779	.4	1.284	.568	116	1.333	.628	.137
			1.597	2.112	2.796			1.178	1.713	2.132	1.951	2.493	2.926	1.205	1.911	3.046			
40											1.178	.523	.117	1.059	.423	.27	1.156	.508	.144
											1.167	1.603	2.435	1.040	1.331	2.073	1.061	1.571	2.359
35			.986	.519	.21						.780	.414	.14				.903	.490	.35
			.862	1.391	2.144						.780	1.110	1.560				.862	1.313	2.138
30		.325	.246	.14		.341	.191	.13			.388	.237	.19				.356	.230	.46
		.246	.526	.868		.278	.474	.741			.294	.564	.981				.253	.551	.923
25																			
20		.241	.101	.10										.111	.026	.9	.179	.100	.19
		.222	.274	.474										.117	.138	.149	.150	.241	.432
15																			
10		.192	.106	.4							.134	.066	.7				.155	.087	.11
		.202	.297	.300							.115	.179	.257				.115	.278	.299
5																			
0																			
5						.041		1									.041		1
10																			
15																			
20																			
25																			
30																			
35																			
40				.434	.146	.50					.778	.504	.2				.447	.186	.52
				.430	.572	.795					.778	1.120	1.261				.430	.580	.746
45S																			
	15E	60E	105E	150E	165W	120W	75W	30W	15E										
LONGITUDE																			



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 570

	MEAN								LAT
70N									70N
65				2.556 .597 3 2.780 3.031 3.134				2.556 .597 3 2.780 3.031 3.134	65
60					2.058 .557 24 2.090 2.621 3.126			2.058 .557 24 2.090 2.621 3.126	60
55					1.889 .474 68 1.902 2.347 2.955	2.224 .669 50 2.395 2.946 3.309	1.755 .628 28 1.829 2.284 2.997	1.978 .606 146 1.583 2.512 3.235	55
50							1.477 .590 172 1.420 2.040 2.942	1.477 .590 172 1.420 2.040 2.942	50
45		1.812 .430 21 1.829 2.277 2.568		1.511 .418 11 1.497 1.881 2.144	2.532 .377 4 2.544 2.869 3.011	1.585 .690 45 1.414 2.028 3.453	1.547 .589 115 1.468 2.237 2.978	1.602 .608 196 1.319 2.259 3.063	45
40					1.430 .564 117 1.398 1.979 2.956		1.301 .418 27 1.238 1.592 2.252	1.405 .542 144 1.330 1.954 2.909	40
35		1.167 .554 21 1.137 1.609 2.380			1.046 .384 14 1.208 1.370 1.611			1.118 .496 35 1.169 1.544 2.352	35
30	.449 .321 14 .369 .598 1.195	.511 .363 13 .345 .851 1.364			.597 .325 19 .448 .911 1.253			.527 .341 46 .362 .872 1.301	30
25									25
20	.342 .135 10 .302 .505 .582					.169 .042 9 .157 .212 .252		.260 .134 19 .228 .348 .575	20
15									15
10	.259 .101 4 .271 .355 .371				.149 .048 7 .134 .208 .219			.189 .089 11 .176 .267 .366	10
5									5
0									0
5			.194 1					.194 1	5
10									10
15									15
20									20
25									25
30									30
35									35
40		.599 .166 50 .603 .773 .896				1.064 .335 2 1.064 1.292 1.386		.617 .197 52 .608 .776 .965	40
45S									45S
15E	60E	105E	150E	165W	120W	75W	30W	15E	
LONGITUDE									

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY  
FL 590

		MEAN										LAT
70N												70N
65					2 323 100 3 2 294 2 405 2 450						2 323 100 3 2 294 2 405 2 450	65
60						2 545 640 24 2 505 3 302 3 682					2 545 640 24 2 505 3 302 3 682	60
55						2 313 558 68 2 445 2 821 3 355	2 607 716 50 2 751 3 361 3 837		2 151 559 28 2 229 2 594 3 292		2 383 641 146 1 982 3 003 3 549	55
50									1 769 640 172 1 784 2 402 3 201		1 769 640 172 1 784 2 402 3 201	50
45			2 217 566 21 2 247 2 788 3 260		1 918 573 11 1 786 2 561 2 919	2 806 662 4 2 815 3 348 3 677	1 979 704 45 1 864 2 619 3 503		1 817 592 115 1 730 2 396 3 268		1 923 643 196 1 674 2 558 3 469	45
40						1 724 582 117 1 637 2 212 3 293			1 632 461 27 1 671 2 010 2 544		1 707 563 144 1 580 2 193 3 257	40
35			1 389 521 21 1 273 2 048 2 322			1 242 354 14 1 341 1 597 1 744					1 330 467 35 1 276 1 791 2 308	35
30		.604 343 14 .561 729 1 410	707 436 13 .484 904 1 685			.827 455 19 .606 1 308 1 754					.725 429 46 .520 1 167 1 744	30
25												25
20		.480 192 10 .475 685 816						.247 088 9 .280 304 344			.369 187 19 .302 526 807	20
15												15
10		.394 147 4 .436 516 541				.251 074 7 .240 312 366					.303 126 11 .289 425 532	10
5												5
0												0
5				.409 1							.409 1	5
10												10
15												15
20												20
25												25
30												30
35												35
40			.777 174 50 .767 962 1 079					1 430 100 2 1 430 1 497 1 525			.802 213 52 .771 999 1 325	40
45S												45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E			

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MARCH  
FL 190

	MEAN										LAT
70N											70N
65					.034 .013 8 .028 .050 .058					.034 .013 8 .028 .050 .058	65
60						.047 .011 29 .049 .057 .067				.047 .011 29 .049 .057 .067	60
55						.048 .012 38 .049 .059 .073	.048 .015 67 .050 .064 .074	.050 .014 34 .048 .063 .079		.049 .014 139 .049 .062 .078	55
50								.053 .023 157 .052 .073 .107		.053 .023 157 .052 .073 .107	50
45			.054 .009 21 .050 .063 .075		.032 .015 16 .028 .044 .067	.037 .007 6 .038 .043 .048	.052 .020 63 .053 .068 .080	.048 .014 142 .045 .056 .064		.047 .016 248 .044 .062 .081	45
40	.060 .012 2 .060 .067 .071					.049 .017 150 .050 .063 .083	.033 .005 2 .033 .036 .037	.043 .012 33 .042 .052 .073		.048 .016 187 .048 .062 .082	40
35			.057 .020 31 .054 .069 .111			.026 .013 22 .028 .036 .055				.045 .023 53 .044 .065 .103	35
30		.039 .012 5 .048 .048 .049	.053 .012 18 .053 .068 .074			.041 .018 32 .040 .052 .081				.045 .017 55 .044 .061 .080	30
25		.051 1								.051 1	25
20		.031 .016 7 .026 .046 .057	.057 1		.046 .008 4 .045 .054 .057		.038 .013 7 .037 .047 .061			.038 .015 19 .037 .057 .062	20
15		.050 1								.050 1	15
10		.037 .009 2 .037 .043 .046				.029 .015 13 .025 .045 .057				.030 .014 15 .027 .046 .057	10
5											5
0											0
5				.013 .009 5 .012 .020 .027						.013 .009 5 .012 .020 .027	5
10											10
15							.022 1			.022 1	15
20											20
25											25
30											30
35				.034 1						.034 1	35
40			.037 .013 56 .034 .046 .062				.016 .002 3 .015 .018 .019			.036 .014 59 .033 .046 .062	40
45S				.036 .017 2 .036 .048 .052	.021 1					.031 .016 3 .021 .043 .052	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

MARCH  
FL 210

[illegible]



[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MARCH  
FL 270

									MEAN	LAT
70N										70N
65					.061 .037 8 .052 .069 .139				.061 .037 8 .052 .069 .139	65
60						.103 .065 29 .081 .162 .262			.103 .065 29 .081 .162 .262	60
55						.066 .038 38 .057 .079 .186	.090 .067 66 .065 .135 .280	.073 .036 35 .062 .100 .160	.079 .054 139 .061 .113 .275	55
50						.057 0.000 2 .057 .057 .057		.069 .039 159 .064 .101 .160	.069 .038 161 .063 .100 .160	50
45			.087 .027 21 .062 .070 .141		.042 .028 16 .031 .053 .115	.054 .030 6 .047 .066 .111	.077 .048 63 .068 .110 .210	.060 .034 142 .052 .079 .145	.064 .038 248 .048 .094 .159	45
40	.091 .029 2 .091 .110 .118					.070 .043 155 .060 .103 .205	.060 .032 4 .057 .088 .103	.053 .030 35 .048 .069 .138	.067 .041 196 .056 .100 .180	40
35			.086 .047 34 .073 .118 .209			.035 .018 24 .032 .053 .072			.064 .045 58 .052 .094 .192	35
30	.074 1	.055 .032 4 .046 .078 .103	.073 .053 18 .061 .088 .218			.042 .017 32 .044 .054 .079			.054 .037 55 .045 .073 .106	30
25		.068 1			.019 1	.065 1			.051 .022 3 .065 .067 .068	25
20		.039 .025 7 .031 .054 .086	.051 .016 3 .045 .063 .071		.034 .017 4 .035 .049 .056		.038 .007 7 .039 .042 .046		.039 .018 21 .039 .052 .083	20
15		.003 1	.056 .011 3 .052 .066 .071			.041 1			.043 .022 5 .045 .059 .070	15
10		.038 .002 2 .038 .039 .040				.031 .014 13 .030 .043 .057			.032 .014 15 .031 .042 .057	10
5										5
0										0
5				.020 .010 5 .020 .031 .034					.020 .010 5 .020 .031 .034	5
10										10
15							.025 1		.025 1	15
20	.008 1								.008 1	20
25										25
30			.032 1						.032 1	30
35				.047 1					.047 1	35
40			.045 .024 56 .039 .063 .084				.031 .020 3 .023 .047 .058		.045 .024 59 .038 .062 .084	40
45S				.040 .031 2 .040 .061 .070	.014 1				.031 .028 3 .014 .053 .069	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E	
	LONGITUDE									

MARCH  
FL 290

MEAN												LAT	
70N												70N	
65						.090 .056 .8 .085 .119 .198						.090 .056 .8 .085 .119 .198	65
60							.151 .089 .37 .125 .229 .382	.261 .110 .23 .266 .342 .504	.284 .104 .5 .340 .355 .355	.200 .114 .65 .180 .318 .480			60
55							.091 .085 .41 .064 .142 .268	.123 .101 .67 .069 .222 .375	.074 .211 .284 .112 .080 .46	.111 .088 .154 .066 .204 .369			55
50							.054 .008 .6 .056 .061 .063	.101 .054 .7 .073 .129 .203	.083 .059 .171 .065 .122 .251	.083 .058 .184 .064 .122 .249			50
45	.048 .001 .2 .048 .049 .049		.087 .050 .21 .072 .099 .222			.051 .045 .17 .035 .078 .171	.055 .036 .6 .044 .070 .124	.101 .068 .67 .085 .140 .300	.067 .048 .143 .052 .089 .195	.076 .056 .256 .048 .116 .284			45
40	.075 .023 .9 .079 .095 .112		.046 .001 .2 .046 .046 .046			.052 .049 .3 .033 .091 .116	.080 .062 .162 .061 .113 .272	.137 .090 .8 .111 .266 .282	.055 .036 .34 .048 .073 .160	.077 .060 .218 .058 .113 .279			40
35	.090 .067 .6 .066 .125 .218		.107 .067 .39 .084 .174 .257	.172	1	.044 .008 .6 .046 .050 .052	.047 .029 .28 .042 .065 .124	.139 .138 .3 .044 .242 .323		.083 .067 .83 .057 .137 .265			35
30	.059 .003 .2 .059 .061 .062	.055 .026 .5 .049 .072 .098	.075 .048 .23 .059 .091 .216			.075 .042 .5 .056 .116 .141	.047 .026 .37 .041 .058 .125	.036 .001 .2 .036 .036 .036		.058 .037 .74 .037 .085 .183			30
25		.057 .010 .3 .081 .065 .070	.021 .012 .5 .017 .031 .041			.065 .029 .7 .070 .087 .090	.038 .008 .3 .036 .045 .048	.040 .1		.046 .024 .19 .044 .072 .089			25
20		.045 .027 .7 .032 .060 .096	.032 .008 .3 .026 .038 .043			.041 .021 .7 .037 .061 .071	.031 .006 .2 .031 .035 .037	.038 .005 .7 .041 .043 .044		.039 .019 .26 .024 .056 .087			20
15		.034 .011 .2 .034 .041 .045	.059 .020 .3 .073 .073 .073							.049 .021 .5 .045 .073 .073			15
10		.034 0.000 .2 .034 .034 .034					.032 .016 .13 .031 .046 .062			.033 .015 .15 .034 .045 .062			10
5							.035 .1			.035 .1			5
0													0
5				.018 .008 .5 .016 .025 .030						.018 .008 .5 .016 .025 .030			5
10													10
15								.026 .1		.026 .1			15
20	.013 .1	.027 .1								.020 .007 .2 .020 .025 .027			20
25	.043 .1									.043 .1			25
30			.025 .1							.025 .1			30
35			.044 .004 .2 .044 .047 .048	.055 .1						.048 .006 .3 .048 .053 .055			35
40			.050 .032 .56 .041 .069 .092					.037 .029 .3 .025 .060 .075		.049 .032 .39 .041 .070 .091			40
45S				.035 .029 .2 .035 .055 .063	.013 .1					.028 .026 .3 .013 .048 .062			45S
15E	60E	105E	150E	165W	120W	75W	30W	15E					
LONGITUDE													



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MARCH  
FL 310

	MEAN										LAT
70N											70N
65											65
60											60
55											55
50											50
45											45
40											40
35											35
30											30
25											25
20											20
15											15
10											10
5											5
0											0
5											5
10											10
15											15
20											20
25											25
30											30
35											35
40											40
45S											45S
15E	60E	105E	150E	165W	120W	75W	30W	15E			
LONGITUDE											

MARCH  
FL 330

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MARCH  
FL 350

	MEAN										LAT
70N											70N
65											65
60											60
55											55
50											50
45											45
40											40
35											35
30											30
25											25
20											20
15											15
10											10
5											5
0											0
5											5
10											10
15											15
20											20
25											25
30											30
35											35
40											40
45S											45S
15E	60E	105E	150E	165W	120W	75W	30W	15E			
LONGITUDE											

MARCH  
FL 370

										MEAN			LAT
70N						.693 .068 2 .693 .739 .758				.693 .068 2 .693 .739 .758	70N		
65				.294 .118 2 .294 .374 .407	.558 .151 52 .572 .653 .968	.626 .135 11 .647 .707 .817	.575 .073 3 .620 .629 .632			.562 .152 68 .566 .663 .928	65		
60				.374 .213 4 .354 .531 .673	.540 .123 37 .583 .654 .727	.584 .197 51 .583 .752 .941	.377 .186 15 .347 .572 .604	.444 .134 11 .408 .583 .644		.524 .187 118 .556 .687 .874	60		
55				.527 .131 34 .530 .655 .740	.635 .095 12 .653 .723 .744	.476 .198 54 .512 .662 .809	.463 .199 82 .506 .640 .804	.382 .214 63 .451 .594 .733		.462 .201 245 .500 .653 .779	55		
50				.415 .249 15 .281 .676 .867	.417 .207 26 .487 .652 .710	.509 .196 9 .549 .694 .776	.212 .227 63 .101 .499 .788	.302 .190 224 .306 .499 .673		.304 .212 337 .296 .536 .736	50		
45	.506 .136 10 .491 .587 .769		.489 .163 22 .524 .617 .733	.409 .249 14 .401 .679 .723	.289 .258 47 .156 .622 .740	.369 .200 27 .303 .570 .837	.324 .229 79 .311 .556 .798	.311 .180 148 .283 .522 .695		.336 .214 347 .313 .572 .785	45		
40	.428 .215 4 .515 .575 .613		.476 .135 6 .492 .610 .658	.322 .229 27 .205 .633 .675	.242 .184 31 .135 .450 .619	.298 .192 306 .273 .503 .705	.206 .185 6 .139 .408 .494	.272 .159 34 .308 .426 .529		.295 .194 414 .272 .505 .691	40		
35	.368 .152 4 .442 .465 .480		.283 .188 45 .275 .492 .619	.225 .191 18 .152 .350 .678	.249 .216 67 .174 .462 .772	.244 .188 103 .186 .462 .687				.254 .197 237 .187 .479 .729	35		
30	.285 .174 4 .243 .450 .527	.107 .067 12 .098 .148 .262	.117 .065 21 .114 .142 .286	.088 .024 4 .098 .105 .108	.140 .123 96 .104 .210 .518	.082 .085 46 .057 .098 .278				.123 .111 183 .091 .168 .516	30		
25		.070 .012 14 .072 .083 .087	.075 .020 2 .075 .088 .093	.065 .014 2 .065 .075 .078	.084 .065 90 .081 .124 .274	.064 0 .000 2 .064 .064 .064	.041 1			.089 .060 111 .075 .114 .269	25		
20		.056 .034 17 .054 .083 .129	.036 .023 5 .028 .060 .070	.057 .031 5 .067 .089 .090	.069 .043 20 .059 .092 .183	.052 .009 2 .052 .057 .060	.049 .015 8 .042 .068 .069			.058 .036 57 .056 .079 .141	20		
15		.022 .016 7 .023 .032 .049	.035 .020 6 .028 .059 .065	.034 .001 2 .034 .035 .035		.032 .004 2 .032 .034 .035				.029 .017 17 .028 .042 .063	15		
10		.051 .009 2 .051 .057 .060				.035 .018 18 .031 .052 .077	.044 1			.037 .018 21 .032 .056 .076	10		
5											5		
0							.028 .007 2 .029 .034 .036			.029 .007 2 .029 .034 .036	0		
5				.034 .011 5 .038 .045 .046			.036 .007 4 .034 .041 .046			.035 .009 8 .035 .045 .047	5		
10			.042 .013 3 .051 .051 .051				.043 .004 4 .045 .047 .047			.043 .009 7 .046 .051 .051	10		
15			.054 .007 4 .057 .059 .060				.042 .018 5 .036 .062 .066			.048 .015 9 .056 .060 .066	15		
20			.053 .006 4 .054 .060 .062				.043 .014 3 .036 .054 .062			.049 .012 7 .050 .062 .063	20		
25			.060 .002 2 .060 .061 .062							.060 .002 2 .060 .061 .062	25		
30		.115 1	.079 .003 2 .079 .081 .082							.081 .017 3 .082 .104 .114	30		
35			.089 .049 8 .067 .124 .191							.089 .049 8 .067 .124 .191	35		
40			.094 .065 57 .076 .152 .264				.050 .036 3 .025 .076 .097			.092 .064 60 .076 .147 .262	40		
45S				.069 .049 2 .069 .101 .115	.054 1					.064 .040 3 .054 .097 .114	45S		
15E	60E	105E	150E	165W	120W	75W	30W	15E					

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MARCH  
FL 390

	MEAN										LAT
70N											70N
65				.844 .000 2 .844 .844 .844		.683 .211 46 .697 .816 1.087					65
60				.669 .159 41 .698 .830 .898		.648 .162 40 .637 .796 1.009		.688 .227 47 .692 .896 1.223	.338 .015 2 .338 .348 .352		60
55				.631 .146 60 .634 .772 .894		.588 .149 20 .625 .696 .806		.583 .206 54 .547 .806 .928	.577 .186 75 .560 .737 .958	.503 .194 38 .556 .681 .793	55
50				.573 .250 58 .619 .773 1.025		.478 .275 18 .496 .714 .971		.660 .180 9 .549 .878 .947	.296 .256 16 .168 .603 .808	.404 .206 177 .419 .609 .790	50
45	.164 .114 6 .147 .284 .327		.640 .196 31 .652 .802 1.005	.534 .236 41 .556 .721 .849		.346 .225 42 .336 .589 .724		.603 .202 25 .606 .828 .959	.370 .230 88 .352 .556 .816	.392 .202 142 .359 .619 .815	45
40	.092 .072 8 .075 .084 .252		.497 .265 35 .498 .776 .976	.362 .222 16 .417 .502 .773		.218 .193 23 .125 .465 .626		.362 .214 312 .357 .576 .850	.285 .247 4 .281 .532 .550	.355 .179 33 .380 .560 .613	40
35	.058 1		.269 .213 37 .192 .540 .677	.129 .053 5 .093 .175 .220		.261 .202 31 .212 .466 .725		.285 .194 80 .238 .518 .734			35
30		.121 .073 4 .125 .193 .196	.135 .086 19 .114 .229 .309			.193 .164 48 .131 .308 .720		.103 .102 50 .075 .127 .368			30
25		.074 1	.026 .017 5 .014 .043 .053			.106 .063 31 .093 .149 .259		.092 .057 6 .075 .120 .199			25
20		.079 .039 7 .081 .098 .148	.039 .024 6 .027 .071 .074	.097 1		.063 .031 5 .079 .090 .092		.048 .036 3 .025 .075 .096	.059 .016 7 .062 .077 .078		20
15			.053 .021 3 .052 .070 .078	.037 1							15
10		.070 .023 2 .070 .085 .091	.036 .001 2 .036 .036 .036					.037 .017 14 .037 .056 .057			10
5			.029 .001 2 .029 .029 .029					.039 1	.034 0 .000 2 .034 .034 .034		5
0			.029 .001 2 .029 .029 .029						.057 .020 2 .033 .070 .075		0
5			.040 .009 2 .040 .046 .049	.038 .012 5 .040 .050 .054					.062 .014 2 .062 .072 .075		5
10			.039 1								10
15									.025 1		15
20											20
25											25
30	.060 .025 5 .065 .077 .095		.055 .000 2 .055 .055 .055								30
35			.064 .003 2 .064 .066 .067								35
40			.114 .077 5 .087 .196 .312						.045 .016 3 .047 .059 .063		40
45S				.098 .073 2 .098 .147 .167	.100 1						45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
LONGITUDE											

CODE: MEAN ST. DEV. N  
50% 84% 98%

MARCH  
FL 410

	MEAN										LAT
70N											70N
65						.737	.638	.8			65
60						.564	.910	2.101			60
55						.580		1			55
50							.870	.302	.35		50
45							.959	1.203	1.406		45
40											40
35							.673	.232	.72		35
30							.635	.883	1.221		30
25											25
20							.656	.249	.37		20
15							.676	.865	1.098		15
10											10
5											5
0											0
5											5
10											10
15											15
20											20
25											25
30											30
35											35
40											40
45S											45S
15E	60E	105E	150E	165W	120W	75W	30W	15E			

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MARCH

FL 430

	MEAN										LAT
70N											70N
65					.741 .334 8 .784 .976 1.223					.741 .334 8 .784 .976 1.223	65
60						.922 .379 29 .946 1.234 1.675				.922 .379 29 .946 1.234 1.675	60
55						.663 .252 38 .616 .945 1.146	.756 .271 67 .759 1.013 1.361	.696 .286 33 .778 .992 1.158		.717 .273 138 .663 .985 1.274	55
50				.731 .031 2 .731 .752 761				.588 .277 170 .580 .821 1.170		.590 .276 172 .583 .816 1.169	50
45			.816 .365 24 .759 1.137 1.643	.662 .249 5 .736 .825 .913	.422 .264 16 .356 .629 .998	.757 .293 6 .706 .877 1.298	.485 .262 63 .454 .725 1.049	.528 .246 141 .535 .773 1.029		.546 .264 255 .535 .794 1.279	45
40			.621 .237 9 .750 .843 .856			.453 .261 147 .459 .700 1.017		.474 .205 33 .432 .688 .889		.465 .254 189 .459 .709 1.007	40
35			.388 .235 32 .320 .674 .827			.303 .163 21 .227 .495 .600				.354 .213 53 .271 .597 .774	35
30	.094 .046 4 .082 .130 .163		.208 .197 18 .145 .264 .751			.114 .098 32 .089 .154 .404				.144 .145 54 .089 .222 .599	30
25	.073 1									.073 1	25
20	.092 .042 7 .092 .122 .152				.039 .022 2 .039 .053 .059		.062 .016 7 .056 .079 .086			.072 .036 16 .066 .107 .146	20
15											15
10	.096 .021 2 .096 .109 .115					.043 .020 13 .046 .068 .071				.050 .027 15 .046 .071 .105	10
5											5
0											0
5				.036 .010 5 .035 .046 .049						.036 .010 5 .035 .046 .049	5
10											10
15							.031 1			.031 1	15
20											20
25											25
30											30
35											35
40			.130 .084 56 .101 .179 .351				.059 .010 3 .056 .067 .071			.126 .084 59 .097 .178 .348	40
45S				.152 .001 2 .152 .153 .153	.282 1					.195 .062 3 .153 .241 .277	45S
15E	60E	105E	150E	165W	120W	75W	30W	15E			
LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MARCH  
FL 450

	MEAN										LAT
70N											70N
65					.877 .437 8 .892 1.365 1.406					.877 .437 8 .892 1.365 1.406	65
60						1.061 .481 29 .956 1.500 2.122				1.061 .481 29 .956 1.500 2.122	60
55						.706 .360 38 .622 1.079 1.468	.841 .331 66 .791 1.230 1.554	.748 .320 33 .763 1.016 1.395		.781 .342 137 .755 1.120 1.584	55
50								.607 .310 171 .617 .911 1.312		.607 .310 171 .617 .911 1.312	50
45			.991 .470 21 .853 1.474 1.974		.462 .247 16 .488 .659 .957	.799 .255 6 .840 .991 1.159	.539 .296 63 .481 .871 1.216	.589 .287 141 .573 .875 1.228		.607 .331 247 .563 .911 1.481	45
40						.517 .302 147 .512 .767 1.343		.544 .274 33 .441 .801 1.205		.522 .298 180 .446 .770 1.353	40
35			.430 .286 31 .343 .729 1.054			.323 .209 21 .225 .490 .801				.387 .263 52 .218 .635 1.035	35
30		.089 .050 4 .088 .147 .167	.221 .210 18 .150 .331 .780			.142 .173 32 .090 .168 .679				.165 .185 54 .085 .243 .879	30
25		.073 1								.073 1	25
20		.103 .047 7 .103 .157 .156			.046 .026 2 .046 .063 .070		.062 .022 7 .059 .086 .097			.078 .042 16 .046 .119 .158	20
15											15
10		.110 .018 2 .110 .122 .127				.047 .017 13 .054 .059 .073				.055 .028 15 .054 .073 .118	10
5											5
0											0
5				.036 .012 5 .039 .045 .053						.036 .012 5 .039 .045 .053	5
10											10
15							.298 1			.298 1	15
20											20
25											25
30											30
35											35
40			.146 .090 56 .115 .218 .374				.110 .042 3 .119 .144 .155			.144 .088 59 .116 .206 .374	40
45S				.177 .022 2 .177 .192 .198	.242 1					.199 .036 3 .199 .228 .240	45S

15E 60E 105E 150E 165W 120W 75W 30W 15E

LONGITUDE



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MARCH  
FL 470

								MEAN	LAT
70N									70N
65				.955 .561 8 .997 1.346 1.950				.955 .561 8 .997 1.346 1.950	65
60					1.178 .524 29 1.057 1.768 2.041			1.178 .524 29 1.057 1.768 2.041	60
55					.747 .348 38 .706 1.022 1.643	.943 .405 66 .810 1.403 1.675	.862 .412 33 .770 1.310 1.784	.869 .400 137 .770 1.354 1.695	55
50							.715 .376 171 .676 1.066 1.585	.715 .376 171 .676 1.066 1.585	50
45		1.040 .496 21 .818 1.563 2.118		.533 .252 16 .475 .836 .915	.724 .385 6 .585 1.049 1.419	.603 .304 63 .504 .918 1.290	.633 .326 141 .589 .929 1.396	.655 .357 247 .589 .952 1.580	45
40					.571 .320 147 .562 .861 1.361		.642 .349 33 .544 1.003 1.437	.584 .327 180 .514 .905 1.402	40
35		.488 .336 31 .400 .613 1.243			.392 .222 21 .444 .624 .762			.449 .299 52 .319 .717 1.229	35
30	.152 .085 4 .149 .237 .246	.210 .184 18 .157 .349 .690			.172 .201 31 .122 .209 .750			.184 .189 53 .129 .242 .814	30
25	.072 1							.072 1	25
20	.121 .051 7 .117 .159 .191			.061 .039 2 .061 .087 .097		.068 .022 7 .061 .090 .108		.090 .048 16 .056 .138 .184	20
15									15
10	.132 .006 2 .132 .136 .138				.053 .021 13 .059 .071 .080			.064 .033 15 .067 .080 .135	10
5									5
0									0
5			.040 .012 5 .039 .046 .059					.040 .012 5 .039 .046 .059	5
10									10
15						1.797 1		1.797 1	15
20									20
25									25
30									30
35									35
40		.190 .107 56 .172 .281 .444				.112 .051 3 .097 .154 .178		.187 .106 59 .164 .279 .441	40
45S			.200 .074 2 .200 .250 .271	.226 1				.209 .062 3 .226 .259 .272	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
	LONGITUDE								

	MEAN	LAT
1000	16.7	18.9
1100	16.7	18.9
1200	16.7	18.9
1300	16.7	18.9
1400	16.7	18.9
1500	16.7	18.9
1600	16.7	18.9
1700	16.7	18.9
1800	16.7	18.9
1900	16.7	18.9
2000	16.7	18.9
2100	16.7	18.9
2200	16.7	18.9
2300	16.7	18.9
2400	16.7	18.9
2500	16.7	18.9
2600	16.7	18.9
2700	16.7	18.9
2800	16.7	18.9
2900	16.7	18.9
3000	16.7	18.9
3100	16.7	18.9
3200	16.7	18.9
3300	16.7	18.9
3400	16.7	18.9
3500	16.7	18.9
3600	16.7	18.9
3700	16.7	18.9
3800	16.7	18.9
3900	16.7	18.9
4000	16.7	18.9
4100	16.7	18.9
4200	16.7	18.9
4300	16.7	18.9
4400	16.7	18.9
4500	16.7	18.9
4600	16.7	18.9
4700	16.7	18.9
4800	16.7	18.9
4900	16.7	18.9
5000	16.7	18.9
5100	16.7	18.9
5200	16.7	18.9
5300	16.7	18.9
5400	16.7	18.9
5500	16.7	18.9
5600	16.7	18.9
5700	16.7	18.9
5800	16.7	18.9
5900	16.7	18.9
6000	16.7	18.9
6100	16.7	18.9
6200	16.7	18.9
6300	16.7	18.9
6400	16.7	18.9
6500	16.7	18.9
6600	16.7	18.9
6700	16.7	18.9
6800	16.7	18.9
6900	16.7	18.9
7000	16.7	18.9
7100	16.7	18.9
7200	16.7	18.9
7300	16.7	18.9
7400	16.7	18.9
7500	16.7	18.9
7600	16.7	18.9
7700	16.7	18.9
7800	16.7	18.9
7900	16.7	18.9
8000	16.7	18.9
8100	16.7	18.9
8200	16.7	18.9
8300	16.7	18.9
8400	16.7	18.9
8500	16.7	18.9
8600	16.7	18.9
8700	16.7	18.9
8800	16.7	18.9
8900	16.7	18.9
9000	16.7	18.9
9100	16.7	18.9
9200	16.7	18.9
9300	16.7	18.9
9400	16.7	18.9
9500	16.7	18.9
9600	16.7	18.9
9700	16.7	18.9
9800	16.7	18.9
9900	16.7	18.9
10000	16.7	18.9

70N																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MARCH  
FL 510

	MEAN								LAT
70N									70N
65				1.307 .512 8 1.347 1.896 1.930				1.307 .512 8 1.347 1.896 1.930	65
60					1.596 .646 28 1.670 2.202 2.753			1.596 .646 28 1.670 2.202 2.753	60
55					995 .436 37 901 1.506 1.820	1.273 .569 66 1.206 2.041 2.363	1.065 .526 33 1.071 1.448 2.524	1.147 .540 136 .938 1.667 2.401	55
50							.896 .469 171 .837 1.344 2.027	.896 .469 171 .837 1.344 2.027	50
45		1.449 .599 21 1.418 2.144 2.541		.759 .340 16 839 .911 1.482	1.039 .266 6 1.098 1.297 1.365	.854 .437 63 788 1.206 2.095	849 .410 140 833 1.198 1.865	.900 .463 246 686 1.290 2.217	45
40					.754 .403 147 .675 1.125 1.779		.784 .470 33 .621 1.236 1.943	.759 .416 180 .623 1.128 1.814	40
35		.599 .396 31 .427 .997 1.489			.495 .327 21 .409 .719 1.291			.557 .373 52 .345 .921 1.330	35
30	.260 .189 4 .224 .429 .469	.377 .256 18 249 .739 .841			.229 .178 32 163 .385 .702			.280 .218 54 167 .526 .837	30
25	.070 1							.070 1	25
20	.161 .067 7 .159 .199 .262			.086 .059 2 .086 .126 .143		.106 .021 7 110 .125 .132		.128 .059 16 .129 .168 .249	20
15									15
10	.177 .017 2 .177 .188 .193				.057 .026 13 .062 .077 .095			.073 .048 15 .067 .095 .184	10
5									5
0									0
5			.056 .012 5 .059 .067 .072					.056 .012 5 .059 .067 .072	5
10									10
15						3.662 1		3.662 1	15
20									20
25									25
30									30
35									35
40		.271 .131 55 .243 .415 .538				.396 .134 3 393 .503 .572		.278 .134 58 .251 .431 .550	40
45S			.318 .104 2 .318 .389 .418	.251 1				.296 .091 3 .251 .367 .415	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
LONGITUDE									

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MARCH  
FL 530

MEAN											LAT
70N											70N
65					1.492 .543 .8 1.456 2.070 2.180					1.492 .543 .8 1.456 2.070 2.180	65
60						1.938 .665 .27 2.190 2.512 2.787				1.938 .665 .27 2.190 2.512 2.787	60
55						1.183 .522 .37 1.080 1.691 2.293	1.514 .567 .66 1.410 2.160 2.701	1.246 .510 .33 1.230 1.707 2.576		1.359 .563 .136 1.168 1.902 2.812	55
50								1.049 .486 .171 980 1.486 2.233		1.049 .486 .171 980 1.486 2.233	50
45			1.861 .674 .21 1.635 2.461 2.790		1.076 .416 .16 1.133 1.375 1.875	1.289 .222 .8 1.311 1.412 1.598	1.060 .477 .63 985 1.647 2.057	1.011 .493 .140 982 1.488 2.106		1.090 .529 .246 839 1.614 2.476	45
40						.910 .470 .147 .791 1.335 2.094		.856 .444 .33 .711 1.191 1.861		.900 .466 .180 .743 1.335 2.137	40
35			.698 .446 .31 .587 1.008 2.051			.657 .309 .21 .664 .931 1.314				.682 .397 .52 .479 .986 2.019	35
30		.314 .213 .4 .261 .515 .610	.457 .300 .18 .333 .711 1.143			.295 .229 .32 223 .376 .961				.350 .265 .54 .237 .574 1.170	30
25		.070 .1								.070 .1	25
20		.183 .078 .7 .188 .223 .297			.099 .060 .2 .089 .140 .157		.136 .031 .7 135 .175 .185			.152 .067 .16 148 .205 .281	20
15											15
10		.199 .030 .2 .199 .219 .227				.061 .029 .13 .066 .090 .104				.079 .055 .15 .069 .104 .211	10
5											5
0											0
5			.073 .031 .5 .069 .096 .123							.073 .031 .5 .069 .096 .123	5
10											10
15							232 .1			.232 .1	15
20											20
25											25
30											30
35											35
40			.383 .170 .56 .366 .548 .708				484 .105 .3 483 .571 .608			.388 .169 .59 .366 .550 .707	40
45S				.435 .061 .2 .435 .476 .494	.620 .1					.496 .101 .3 .496 .580 .615	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MARCH  
FL 550

	MEAN								LAT
70N									70N
65				1.699 .759 .8				1.699 .759 .8	65
60				1.372 2.620 2.788				1.372 2.620 2.788	60
55					2.187 .612 .27			2.187 .612 .27	55
50					2.263 2.868 3.107			2.263 2.868 3.107	50
45					1.469 .538 .36	1.834 .563 .66	1.541 .584 .33	1.665 .586 .135	45
40					1.384 1.895 2.698	1.800 2.399 3.008	1.370 2.064 2.875	1.600 2.330 3.047	40
35							1.306 .514 .174	1.306 .514 .174	35
30							1.245 1.799 2.478	1.245 1.799 2.478	30
25									25
20									20
15									15
10									10
5									5
0									0
5									5
10									10
15									15
20									20
25									25
30									30
35									35
40									40
45S									45S
15E	60E	105E	150E	165W	120W	75W	30W	15E	
LONGITUDE									

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MARCH  
FL 570

MEAN											LAT
70N											70N
65					2.343 .793 .8 2.002 2.897 3.999					2.343 .793 .8 2.002 2.897 3.999	65
60						2.600 .614 .27 2.614 3.190 3.701				2.600 .614 .27 2.614 3.190 3.701	60
55						1.770 .586 .36 1.621 2.371 3.052	2.067 .610 .66 1.940 2.773 3.325	1.773 .548 .33 1.714 2.280 2.987		1.916 .607 .135 1.790 2.562 3.340	55
50								1.560 .539 .174 1.558 2.103 2.706		1.560 .539 .174 1.558 2.103 2.706	50
45			2.195 .637 .21 2.271 2.667 3.475		1.707 .448 .16 1.746 2.135 2.281	2.067 .508 .6 2.106 2.591 2.637	1.507 .535 .63 1.405 2.055 2.659	1.522 .560 .140 1.417 2.142 2.871		1.601 .590 .246 1.326 2.246 2.974	45
40						1.408 .490 .147 1.411 1.873 2.445		1.280 .463 .33 1.249 1.724 2.304		1.384 .487 .180 1.338 1.872 2.409	40
35			1.127 .546 .31 .999 1.502 2.660			1.146 .394 .21 1.149 1.599 1.852				1.135 .490 .52 .871 1.599 2.387	35
30		.614 .262 .4 .629 .861 .927	.679 .255 .18 .715 .972 1.072			.587 .362 .32 .477 .861 1.542				.620 .326 .54 .439 .920 1.272	30
25		.159 .1								.159 .1	25
20		.344 .155 .7 .348 .490 .556			.375 .163 .2 .375 .486 .531		221 .054 .7 261 .265 .267			.294 .139 .16 .224 .441 .557	20
15											15
10		.518 .288 .2 .518 .713 .794				.118 .045 .13 .113 .153 .214				.171 .177 .15 .119 .214 .644	10
5											5
0											0
5				.287 .055 .5 .324 .334 .341						.287 .055 .5 .324 .334 .341	5
10											10
15							.084 .1			.084 .1	15
20											20
25											25
30											30
35											35
40			.695 .224 .56 .693 .923 1.116				.791 .156 .3 .750 .919 .989			.700 .222 .59 .702 .942 1.113	40
45S				.805 .019 .2 .805 .817 .822	.908 .1					.839 .051 .3 .823 .881 .905	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MARCH  
FL 590

										LAT		
										MEAN		
70N										70N		
65										2.764 503 8 2.961 3.173 3.344		65
60										2.823 .620 27 2.762 3.390 4.065		60
55										2.092 469 36 1.960 2.634 3.047		55
50										2.426 662 65 2.330 3.047 3.983		50
45										2.094 505 33 2.104 2.582 3.111		45
40										1.884 619 174 1.864 2.518 3.332		40
35										1.884 619 174 1.864 2.518 3.332		35
30										1.827 594 140 1.744 2.510 3.197		30
25										1.911 615 246 1.604 2.589 3.366		25
20										1.621 621 63 1.735 2.439 3.454		20
15										1.695 538 146 1.705 2.271 2.882		15
10										1.549 430 33 1.552 2.050 2.264		10
5										1.422 525 52 1.116 1.879 2.423		5
0										.843 393 54 .603 1.201 1.768		0
5										.317		5
10										.810 424 32 .709 1.184 1.829		10
15										.451 .081 7 .461 .533 552		15
20										.511 .181 16 .439 .651 .815		20
25										.217 .061 13 .206 .274 .331		25
30										.280 .223 15 .211 .316 .873		30
35												35
40												40
45S												45S
15E	60E	105E	150E	165W	120W	75W	30W	15E				
LONGITUDE												

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

APRIL  
FL 190

											MEAN			LAT							
70N																				70N	
65						.039 .040	.016 .054	.11 .072									.039 .040	.016 .054	.11 .072	65	
60									.050 .052	.015 .064	.33 .072						.050 .052	.015 .064	.33 .072	60	
55									.055 .052	.022 .066	.30 .108	.058 .059	.017 .073	.61 .090	.055 .057	.010 .067	.36 .072	.056 .057	.017 .070	.127 .089	55
50															.059 .057	.020 .078	.152 .101	.059 .057	.020 .078	.152 .101	50
45			.060 .059	.013 .072	.21 .089	.055 .047	.021 .081	.13 .085	.050 .046	.023 .061	.13 .107	.056 .056	.021 .074	.57 .099	.052 .051	.013 .062	.131 .086	.054 .053	.017 .066	.235 .086	45
40						.057		1	.054 .053	.018 .068	.123 .093	.070 .070	.008 .075	.2 .077	.056 .055	.016 .067	.29 .095	.054 .054	.017 .068	.155 .094	40
35			.059 .061	.014 .072	.25 .083	.064		1	.044 .039	.022 .070	.16 .086							.054 .050	.019 .072	.42 .085	35
30		.052 .051	.014 .062	.19 .079	.055 .051	.017 .064	.19 .095		.048 .047	.013 .059	.30 .071							.051 .048	.014 .062	.68 .081	30
25		.058 .057	.013 .069	.3 .073														.058 .057	.013 .069	.3 .073	25
20		.039 .039	.005 .044	.9 .045					.061 .073	.032 .091	.5 .093			.043 .038	.019 .051	.14 .087		.045 .025	.021 .066	.28 .092	20
15																					15
10		.015 .015	.001 .016	.3 .016								.036 .035	.019 .056	.14 .067				.033 .032	.019 .053	.17 .067	10
5																					5
0																					0
5						.003		1										.003		1	5
10																					10
15						.020		1				.006		1				.013 .013	.007 .018	.2 .020	15
20																					20
25																					25
30																					30
35																					35
40				.034 .031	.010 .040	.48 .058						.021		1				.034 .031	.010 .040	.49 .057	40
45S																					45S
		15E	60E	105E	150E	165W	120W	75W	30W	15E											
											LONGITUDE										



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

APRIL  
FL 210

									MEAN	LAT
70N										70N
65					.041 .013 11 .041 .056 .061				.041 .013 11 .041 .056 .061	65
60						.055 .025 33 .055 .059 108			.055 .025 33 .055 .069 108	60
55						.058 .024 30 .055 .070 129	.061 .019 61 .064 .077 .094	.060 .011 38 .061 .071 .084	.060 .018 129 .060 .074 .098	55
50					.140 1			.062 .023 161 .059 .079 .114	.063 .024 162 .059 .080 .115	50
45			.062 .012 21 .061 .077 .083		.055 .018 17 .052 .071 .092	.055 .023 16 .045 .077 108	.059 .020 57 .059 .078 101	.054 .016 131 .052 .064 .098	.056 .018 242 .050 .070 102	45
40	.082 1				.099 .063 5 .063 .165 .196	.056 .018 136 .058 .074 .090	.066 .037 16 .064 .102 .137	.056 .016 29 .055 .068 .093	.058 .024 187 .057 .076 .115	40
35			.063 .016 29 .063 .079 .091		.068 .025 7 .063 .084 .116	.047 .019 27 .050 .064 .088			.057 .020 63 .055 .077 .095	35
30		.055 .015 20 .054 .069 .083	.054 .013 19 .054 .063 .082			.049 .018 30 .054 .066 .079			.052 .016 69 .054 .066 .085	30
25	.034 1	.056 .011 3 .055 .065 .069							.051 .014 4 .049 .063 .069	25
20		.041 .006 10 .043 .046 .048	.081 .002 2 .081 .082 .083		.057 .020 24 .061 .074 .088		.040 .021 14 .037 .054 .089		.050 .021 50 .037 .073 .093	20
15		.040 1				.038 .004 4 .040 .042 .043			.039 .004 5 .040 .041 .043	15
10		.017 .006 3 .015 .022 .025				.037 .018 14 .036 .049 .072	.030 .004 3 .032 .033 .033		.033 .017 20 .029 .048 .070	10
5										5
0		.016 1							.016 1	0
5				.003 1					.003 1	5
10			.025 1						.025 1	10
15							.006 1		.006 1	15
20				.025 1			.023 1		.024 .001 2 .024 .025 .025	20
25										25
30										30
35				.027 .012 5 .030 .036 .038					.027 .012 5 .030 .036 .038	35
40			.034 .011 48 .032 .044 .067				.021 1		.034 .011 49 .031 .044 .067	40
45S										45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E	
	LONGITUDE									

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

APRIL  
FL 230

											MEAN			LAT
70N														70N
65					.045 .017 11 .037 .067 .073							.045 .017 11 .037 .067 .073		65
60						.058 .021 33 .059 .079 .100						.058 .021 33 .059 .079 .100		60
55						.060 .024 30 .057 .070 .131	.068 .024 61 .068 .085 .125	.064 .015 36 .063 .075 .098		.065 .022 127 .064 .077 .127			55	
50					.056 1			.065 .026 156 .060 .085 .133		.065 .026 157 .059 .085 .133			50	
45	.045 1		.066 .014 21 .064 .075 .097		.064 .037 17 .055 .086 .159	.063 .040 16 .056 .085 .160	.067 .033 37 .065 .087 .152	.055 .022 131 .052 .069 .115		.060 .028 243 .054 .076 .147			45	
40	.078 1				.072 .051 8 .059 .133 .143	.059 .021 143 .057 .078 108	.043 .032 7 .024 .065 .104	.055 .018 29 .054 .069 .101		.058 .024 188 .055 .078 .116			40	
35			.068 .020 29 .063 .089 .112		.049 .024 9 .054 .067 .086	.050 .023 31 .047 .067 .106				.058 .024 69 .058 .078 .113			35	
30		.056 .015 19 .054 .069 .089	.055 .011 19 .055 .064 .070			.051 .018 30 .051 .067 .087				.054 .016 68 .053 .067 .091			30	
25	.019 1	.057 .009 4 .060 .066 .066								.050 .017 5 .053 .066 .066			25	
20		.042 .008 9 .044 .051 .053			.053 .020 9 .051 .069 .082		.038 .020 14 .038 .051 .083			.044 .018 32 .028 .055 .087			20	
15		.070 1	.015 1			.043 .009 2 .043 .049 .052				.043 .020 4 .034 .061 .069			15	
10		.020 .010 3 .017 .029 .033				.041 .021 14 .039 .069 .077				.037 .021 17 .035 .060 .076			10	
5													5	
0													0	
5				.003 1						.003 1			5	
10													10	
15							.007 1			.007 1			15	
20							.037 .008 2 .037 .042 .044			.037 .008 2 .037 .042 .044			20	
25													25	
30			.028 1							.028 1			30	
35				.027 .004 2 .027 .029 .030						.027 .004 2 .027 .029 .030			35	
40			.037 .012 48 .033 .048 .069				.021 1			.036 .013 49 .033 .048 .069			40	
45S													45S	
	15E	60E	105E	150E	165W	120W	75W	30W	15E					
	LONGITUDE													

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

APRIL  
FL 250

										MEAN	LAT
70N											70N
65					.052 .026 .11 .049 .071 .104					.052 .026 .11 .049 .071 .104	65
60						.068 .032 .33 .063 .093 .157				.068 .032 .33 .063 .093 .157	60
55						.062 .024 .30 .057 .076 .131	.079 .041 .61 .069 .103 .205	.070 .019 .36 .068 .080 .117		.072 .033 .127 .067 .087 .166	55
50					.080 .1				.071 .033 .154 .063 .098 .166	.071 .033 .155 .063 .097 .166	50
45			.077 .035 .21 .063 .068 .177		.069 .068 .14 .050 .072 .252	.077 .071 .15 .057 .082 .267	.079 .054 .57 .065 .101 .260	.062 .029 .132 .057 .081 .126		.068 .044 .239 .058 .087 .223	45
40	.064 .1				.076 .048 .3 .075 .116 .134	.065 .028 .132 .062 .090 .127	.056 .029 .5 .067 .081 .091	.062 .025 .29 .056 .089 .118		.065 .028 .170 .058 .090 .128	40
35	.052 .1		.072 .028 .29 .071 .090 .147		.055 .024 .9 .066 .076 .090	.060 .045 .23 .050 .068 .194				.065 .035 .62 .050 .082 .153	35
30		.058 .016 .19 .055 .069 .093	.058 .013 .19 .058 .070 .078			.054 .018 .30 .057 .071 .086				.056 .016 .68 .054 .071 .086	30
25		.055 .008 .3 .053 .061 .065	.045 .1							.052 .008 .4 .050 .059 .064	25
20		.045 .010 .9 .045 .056 .062			.050 .022 .7 .059 .071 .074		.039 .013 .14 .041 .053 .056			.043 .016 .30 .037 .058 .072	20
15		.057 .004 .2 .057 .060 .061								.057 .004 .2 .057 .060 .061	15
10		.019 .005 .3 .019 .023 .025				.044 .020 .14 .041 .062 .083	.055 .1			.040 .020 .18 .037 .057 .082	10
5											5
0											0
5				.003 .1						.003 .1	5
10											10
15							.008 .1			.008 .1	15
20							.030 .005 .2 .030 .033 .035			.030 .005 .2 .030 .033 .035	20
25											25
30											30
35			.025 .002 .3 .026 .027 .028							.025 .002 .3 .026 .027 .028	35
40			.038 .013 .48 .035 .052 .063				.020 .1			.038 .013 .49 .035 .052 .063	40
45S											45S
15E	60E	105E	150E	165W	120W	75W	30W	15E			
LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

APRIL  
FL 270

[illegible]



									MEAN			LAT
70N												70N
65					.190 .114 .12 .188 .325 .362					.190 .114 .12 .188 .325 .362		65
60				.138 .003 .3 .139 .140 .141	.113 .1	.172 .136 .33 .128 .373 .441		.066 .010 .2 .066 .072 .075		.163 .128 .39 .128 .336 .425		60
55				.123 .041 .4 .113 .158 .183	.146 .136 .8 .102 .339 .367	.098 .058 .32 .079 .162 .235	.155 .116 .61 .095 .263 .461	.156 .126 .48 .095 .304 .475		.142 .112 .151 .091 .248 .466		55
50				.099 .008 .3 .100 .105 .108	.163 .135 .12 .112 .345 .361	.164 .046 .2 .164 .194 .207	.300 .1	.136 .101 .156 .097 .233 .407		.138 .104 .174 .098 .246 .407		50
45	.056 .1		.121 .088 .22 .090 .163 .361	.092 .043 .2 .092 .120 .132	.101 .123 .31 .071 .127 .485	.104 .085 .24 .080 .106 .346	.167 .176 .60 .090 .301 .731	.104 .075 .131 .075 .160 .336		.119 .115 .271 .081 .168 .494		45
40	.167 .055 .3 .186 .211 .222		.026 .003 .3 .028 .029 .029		.066 .070 .12 .049 .081 .241	.118 .099 .160 .081 .183 .406	.095 .067 .6 .070 .126 .226	.117 .093 .29 .077 .216 .346		.114 .097 .213 .077 .185 .397		40
35	.121 .070 .4 .095 .171 .230		.084 .051 .40 .075 .117 .216	.020 .1	.073 .028 .17 .071 .090 .136	.083 .048 .22 .081 .112 .206				.082 .049 .84 .046 .112 .243		35
30	.047 .013 .4 .044 .056 .067	.070 .027 .23 .068 .085 .138	.077 .031 .19 .072 .087 .155		.074 .009 .5 .072 .081 .089	.057 .025 .32 .050 .088 .109				.066 .027 .83 .064 .087 .135		30
25	.039 .001 .4 .039 .040 .040	.058 .023 .8 .050 .070 .107	.090 .1		.079 .017 .7 .084 .094 .098					.063 .024 .20 .050 .090 .107		25
20		.049 .014 .15 .040 .060 .077	.054 .012 .2 .054 .061 .065	.014 .000 .2 .014 .014 .014	.068 .033 .27 .067 .098 .126		.049 .018 .14 .043 .065 .082			.056 .028 .60 .044 .086 .112		20
15		.033 .014 .6 .036 .044 .051	.025 .023 .6 .013 .055 .061		.043 .014 .6 .051 .054 .054	.040 .001 .2 .040 .040 .040				.034 .018 .20 .024 .053 .059		15
10		.030 .015 .6 .027 .041 .057	.054 .009 .2 .054 .059 .062	.016 .002 .5 .017 .017 .018	.020 .006 .3 .018 .025 .028	.045 .021 .14 .043 .052 .095	.024 .006 .2 .024 .027 .029			.034 .020 .32 .022 .050 .080		10
5		.027 .010 .4 .023 .034 .042	.053 .1	.014 .006 .7 .015 .020 .021			.030 .1			.022 .013 .13 .020 .031 .051		5
0			.033 .1	.013 .006 .9 .014 .019 .020			.029 .002 .2 .029 .030 .031			.018 .009 .12 .016 .028 .033		0
5			.028 .004 .4 .028 .032 .033	.014 .006 .6 .013 .021 .022			.029 .004 .3 .031 .032 .032			.021 .009 .13 .022 .031 .033		5
10			.027 .005 .4 .029 .032 .032	.020 .006 .4 .022 .025 .025			.035 .005 .2 .035 .038 .040			.026 .008 .10 .026 .032 .039		10
15			.037 .004 .2 .037 .040 .041	.015 .005 .5 .015 .020 .021			.023 .009 .3 .028 .030 .031			.022 .010 .10 .018 .032 .040		15
20			.035 .006 .2 .035 .038 .040	.019 .1			.039 .1			.032 .009 .4 .034 .040 .040		20
25			.032 .004 .4 .033 .035 .035							.032 .004 .4 .033 .035 .035		25
30			.035 .006 .6 .034 .037 .046	.039 .011 .3 .041 .048 .051						.036 .008 .9 .034 .045 .050		30
35			.028 .011 .9 .029 .032 .049	.032 .010 .11 .031 .045 .051						.030 .011 .20 .024 .043 .052		35
40			.045 .028 .49 .038 .058 .130	.032 .005 .4 .032 .037 .039			.021 .1			.044 .027 .54 .038 .058 .125		40
45S												45S
15E	60E	105E	150E	165W	120W	75W	30W	15E				

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

APRIL  
FL 330

MEAN																			LAT
70N																			70N
65																			65
60																			60
55																			55
50																			50
45																			45
40																			40
35																			35
30																			30
25																			25
20																			20
15																			15
10																			10
5																			5
0																			0
5																			5
10																			10
15																			15
20																			20
25																			25
30																			30
35																			35
40																			40
45S																			45S
15E	60E	105E	150E	165W	120W	75W	30W	15E											
LONGITUDE																			

**CODE:**

MEAN	ST. DEV.	N
50%	84%	98%

APRIL  
FL 350

[illegible]



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

APRIL  
FL 370

MEAN																		LAT							
70N										.615 .087 6 .582 .654 .784			.607 .066 10 .597 .686 .709						.610 .075 16 .585 .688 .774			70N			
65							.498 .238 69 .554 .736 .846			.621 .083 21 .630 .666 .786			.431 .127 15 .424 .558 612			.542 .065 5 .570 .591 .597			.514 .206 110 .412 .715 .838			65			
60				.435 .234 14 .404 .684 .828			.524 .229 82 .560 .792 .841			.512 .208 80 .544 .674 .924			.565 .149 15 .608 .682 .737			.397 .137 15 .423 .535 .544			.507 .214 206 .534 .695 .860			60			
55				.584 .178 32 .582 .800 .871			.454 .184 28 .476 .645 .730			.369 .204 51 .370 .588 .786			.417 .211 68 .425 .625 .797			.396 .231 70 .403 .645 .774			.427 .218 249 .448 .661 .832			55			
50				.492 .273 23 .565 .722 .908			.276 .192 35 .218 .501 .643			.424 .244 13 .577 .637 .665			.407 .130 24 .406 .506 .660			.374 .193 187 .366 .562 .738			.377 .205 282 .357 .584 .747			50			
45	.352 .046 5 .340 .396 .414			.395 .184 22 .387 .588 .697			.265 .215 49 .124 .515 .680			.271 .240 57 .152 .564 .744			.384 .241 46 .409 .661 .804			.314 .264 81 .237 .520 1.264			.311 .162 145 .302 .486 .632			.314 .217 405 .283 .535 .749			45
40	.440 1			.180 .147 16 .105 .280 .554			.240 .196 58 .171 .466 .658			.218 .218 54 .116 .490 .696			.257 .200 335 .174 .490 .762			.185 .212 4 .073 .323 .523			.330 .175 31 .333 .509 .614			.253 .201 499 .174 .490 .749			40
35	.083 .006 2 .083 .087 .089			.195 .170 63 .115 .342 .717			.369 .166 13 .374 .486 .628			.145 .145 157 .089 .228 .573			.199 .192 49 .121 .322 .745									.175 .168 284 .098 .338 .710			35
30	.120 .039 2 .120 .147 .157			.113 .066 21 .093 .151 .296			.105 .056 30 .092 .150 .240						.102 .062 165 .086 .132 .305			.071 .052 30 .065 .092 .220						.100 .062 248 .083 .133 .310			30
25				.085 .029 9 .097 .111 .127			.059 .027 8 .055 .079 .102						.102 .047 141 .099 .138 .210									.099 .047 158 .056 .132 .198			25
20				.056 .026 12 .050 .075 .110			.033 .028 4 .030 .061 .067			.021 .023 8 .010 .023 .073			.091 .072 36 .086 .130 .308			.048 .009 7 .044 .058 .064			.060 .021 14 .052 .079 .102			.067 .056 81 .052 .099 .235			20
15				.025 0.000 2 .025 .025 .025			.022 .023 5 .009 .048 .052						.021 .012 15 .016 .035 .042			.053 .016 10 .044 .070 .082						.031 .021 32 .022 .046 .076			15
10				.045 .020 5 .041 .059 .080			.012 .003 6 .013 .014 .016			.019 .013 12 .013 .034 .042			.047 .019 20 .045 .064 .082			.050 .015 6 .052 .063 .072						.036 .022 49 .035 .059 .083			10
5							.011 .004 9 .012 .014 .017			.028 .006 4 .027 .033 .036						.028 .005 4 .030 .031 .032						.019 .010 17 .017 .029 .035			5
0				.032 1			.017 .013 8 .015 .018 .045			.034 .005 6 .032 .038 .042						.038 .012 5 .033 .046 .059						.028 .014 20 .028 .038 .056			0
5				.019 .005 2 .019 .022 .024			.014 .011 9 .009 .023 .035			.028 .000 4 .028 .029 .029						.040 .010 6 .036 .049 .058						.025 .014 21 .028 .036 .054			5
10				.024 .009 2 .024 .030 .033			.013 .008 10 .016 .020 .022			.022 .001 2 .022 .022 .022						.038 .004 6 .038 .042 .043						.022 .012 20 .014 .037 .043			10
15							.013 .009 7 .018 .022 .022									.039 .012 9 .043 .047 .056						.027 .017 16 .022 .045 .054			15
20							.009 .004 2 .009 .011 .012									.038 .013 5 .041 .050 .055						.030 .018 7 .027 .047 .055			20
25							.020 .008 5 .020 .027 .031															.020 .008 5 .020 .027 .031			25
30																									30
35				.025 .009 3 .029 .032 .034																		.025 .009 3 .029 .032 .034			35
40				.075 .032 48 .064 .114 .140												.027 1						.074 .032 49 .064 .113 .140			40
45S																									45S
15E 60E 105E 150E 165W 120W 75W 30W 15E																									
LONGITUDE																									

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

APRIL  
FL 390

														MEAN			LAT
70N															70N		
65					.566 .056 3	.602 .154 107	.611 1						.602 .152 111		65		
					.601 .632 .544	.596 .750 .941							.601 .744 .939				
60					.615 .182 .66	.511 .284 .42	.621 .217 .39	.568 .060 .5	.576 .168 .15	.585 .221 .167			.624 .800 .959		60		
					.659 .785 .900	.463 .828 .961	.588 .852 1.029	.584 .610 .617	.624 .670 .865								
55					.654 .199 .65	.580 .167 .19	.475 .199 .37	.562 .190 .90	.501 .181 .70	.558 .200 .281			.567 .769 .922		55		
					.671 .827 .980	.622 .711 .796	.509 .670 .820	.535 .756 .896	.497 .664 .877								
50					.635 .190 .31	.299 .188 .19	.400 .230 .15	.481 .180 .18	.484 .195 .168	.484 .209 .251			.489 .683 .991		50		
					.561 .829 .902	.262 .473 .722	.467 .639 .685	.462 .684 .754	.490 .672 .867								
45	.584	1			.516 .230 .28	.419 .238 .56	.391 .263 .60	.462 .306 .67	.439 .274 .78	.403 .186 .131	.427 .248 .421				45		
					.552 .773 .884	.431 .656 .846	.343 .702 .932	.495 .816 .976	.396 .620 1.413	.400 .595 .776	.410 .666 .934						
40					.462 .280 .17	.359 .229 .34	.364 .227 .70	.317 .233 .280	.512 .168 .3	.386 .212 .29	.339 .235 .433				40		
					.531 .745 .881	.374 .595 .778	.354 .607 .768	.235 .561 .866	.399 .638 .736	.394 .576 .787	.281 .596 .856						
35					.275 .220 .35	.379 .228 .4	.186 .129 .42	.238 .198 .65			.236 .192 .146				35		
					.170 .498 .811	.336 .591 .700	.140 .318 .584	.160 .425 .821			.126 .413 .798						
30					.132 .084 .19	.127 .091 .21	.122 .035 .6	.162 .099 .45	.091 .049 .36		.130 .086 .127				30		
					.096 .206 .336	.090 .193 .367	.109 .160 .178	.135 .239 .361	.082 .128 .223		.101 .204 .336						
25	.049	1			.079 .016 .3	.076 .006 .4		.161 .101 .36	.084 .028 .4		.140 .098 .48				25		
					.079 .093 .098	.076 .083 .083		.140 .293 .400	.092 .109 .109		.108 .216 .379						
20					.069 .031 .9	.090 .017 .2	.086 .008 .3	.137 .077 .12	.085 .029 .3	.060 .016 .16	.087 .054 .45				20		
					.075 .084 .131	.090 .101 .105	.084 .092 .096	.114 .224 .253	.097 .109 .113	.055 .071 .099	.075 .114 .245						
15					.047 .013 .2				.039 1	.049 0.000 .2	.046 .009 .5				15		
					.047 .056 .059					.049 .049 .049	.049 .053 .059						
10					.054 .028 .3		.042 .007 .3	.043 .021 .14	.033 1		.044 .021 .21				10		
					.040 .076 .091		.045 .047 .048	.041 .050 .094			.040 .050 .103						
5					.017 1	.043 .005 .2	.037 .008 .2	.035 .037 .036		.035 .003 .2	.035 .010 .7				5		
						.043 .046 .048	.037 .042 .045			.035 .037 .036	.037 .045 .048						
0						.054 .006 .2	.023 1			.033 .001 .2	.033 .013 .5				0		
						.054 .057 .059				.033 .033 .033	.033 .032 .058						
5						.011 1	.062 .027 .3			.042 .003 .2	.047 .026 .6				5		
							.076 .082 .085			.042 .043 .044	.034 .078 .084						
10						.075 .001 .2	.049 .026 .3			.044 .001 .2	.055 .021 .7				10		
						.075 .075 .075	.037 .070 .084			.044 .045 .045	.045 .075 .085						
15					.026 1	.067 .002 .2	.041 .014 .2			.026 .007 .2	.042 .019 .7				15		
						.067 .068 .069	.041 .051 .054			.026 .031 .033	.033 .064 .068						
20							.034 .003 .3				.031 .012 .5				20		
							.025 .026 .026				.026 .040 .051						
25					.045 .000 .2	.014 .003 .3	.021 1				.026 .014 .6				25		
					.045 .045 .045	.013 .017 .019					.020 .044 .045						
30					.038 .003 .2	.020 .002 .2					.029 .009 .4				30		
					.038 .039 .040	.020 .021 .021					.028 .038 .040						
35						.061 .052 .9					.061 .052 .9				35		
						.076 .113 .138					.076 .113 .138						
40					.092 .042 .48				.061 1		.091 .042 .49				40		
					.082 .133 .196						.081 .135 .196						
45S															45S		
15E	60E	105E	150E	165W	120W	75W	30W	15E									
LONGITUDE																	

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

APRIL  
FL 410

	MEAN								LAT
70N									70N
65				.418	1	.875	.273	.12	65
60				.740	.153	.8			60
55				.788	.871	.921			55
50				.712	.186	.33			50
45				.669	.943	1.081			45
40				.753	.197	.46			40
35				.751	.951	1.106			35
30	.573	.103	.3						30
25	.608	.555	.674						25
20	.591	.063	.5						20
15	.597	.643	.687						15
10	.380	.199	.8						10
5	.410	.616	.631						5
0									0
5									5
10									10
15									15
20									20
25									25
30									30
35									35
40									40
45S									45S
15E	60E	105E	150E	165W	120W	75W	30W	15E	
LONGITUDE									

70N										70N	
65					.954 .262 11 .884 1.237 1.305					.954 .262 11 .884 1.237 1.305	65
60						.799 .346 32 .757 1.176 1.483				.799 .346 32 .757 1.176 1.483	60
55				.527 .128 5 .503 .614 .743		.658 .206 30 .660 .877 1.053	.732 .237 61 .728 .965 1.227	.587 .217 36 .587 .797 1.051	.668 .231 132 .599 .896 1.207	.668 .231 132 .599 .896 1.207	55
50				.719 .106 6 .702 .804 .892			.333 .015 2 .333 .343 .347	.636 .275 158 .596 .639 1.444	.635 .271 166 .600 .838 1.440	.635 .271 166 .600 .838 1.440	50
45		.660 .204 26 .655 .843 .979	.739 .165 5 .715 .871 .992	.765 .347 13 .620 1.086 1.554	.440 .182 31 .470 .675 .719	.581 .345 61 .517 .770 1.604	.541 .188 131 .538 .723 .903	.565 .254 267 .539 .753 1.174	.565 .254 267 .539 .753 1.174	.565 .254 267 .539 .753 1.174	45
40		.548 .149 13 .591 .673 .784		.409 .078 4 .449 .458 .463	.431 .257 139 .370 .628 1.073	.356 1	.494 .235 29 .474 .699 1.028	.448 .247 186 .367 .649 1.062	.448 .247 186 .367 .649 1.062	.448 .247 186 .367 .649 1.062	40
35		.358 .214 30 .303 .575 .785		.260 .074 3 .233 .321 .357	.214 .173 16 .152 .326 .633			.305 .206 49 .239 .561 .764	.305 .206 49 .239 .561 .764	.305 .206 49 .239 .561 .764	35
30	.131 .061 19 .119 .180 .269	.208 .160 19 .158 .359 .591		.316 .108 3 .279 .404 .456	.119 .065 30 .102 .143 .305			.155 .113 71 .119 .243 .439	.155 .113 71 .119 .243 .439	.155 .113 71 .119 .243 .439	30
25	.101 .027 3 .099 .124 .135			.201 1				.126 .049 4 .118 .170 .197	.126 .049 4 .118 .170 .197	.126 .049 4 .118 .170 .197	25
20	.079 .051 9 .088 .103 .181	.080 1		.033 1		.081 .038 14 .073 .110 .174		.078 .043 25 .075 .106 .193	.078 .043 25 .075 .106 .193	.078 .043 25 .075 .106 .193	20
15	.083 1	.073 1						.078 .005 2 .078 .081 .083	.078 .005 2 .078 .081 .083	.078 .005 2 .078 .081 .083	15
10	.077 .043 3 .049 .110 .134				.046 .020 14 .042 .063 .086			.051 .028 17 .044 .070 .122	.051 .028 17 .044 .070 .122	.051 .028 17 .044 .070 .122	10
5											5
0											0
5			.031 1					.031 1	.031 1	.031 1	5
10											10
15						.021 1		.021 1	.021 1	.021 1	15
20											20
25			.073 1					.073 1	.073 1	.073 1	25
30											30
35			.181 .057 7 .201 .231 .234					.181 .057 7 .201 .231 .234	.181 .057 7 .201 .231 .234	.181 .057 7 .201 .231 .234	35
40		.145 .070 48 .134 .198 .318				.159 1		.145 .069 49 .134 .198 .318	.145 .069 49 .134 .198 .318	.145 .069 49 .134 .198 .318	40
45S											45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

APRIL  
FL 450

										MEAN			LAT
70N													70N
65					1.140 .479 11 1.079 1.634 1.851							1.140 .479 11 1.079 1.634 1.851	65
60							.906 .382 32 .865 1.358 1.526					.906 .382 32 .865 1.358 1.526	60
55							.659 .294 30 .649 .872 1.165	.797 .290 61 .783 1.109 1.333	.691 .256 36 .706 .913 1.188	.735 .275 127 .721 1.030 1.323		.735 .275 127 .721 1.030 1.323	55
50									.734 .337 158 .676 .972 1.644	.734 .337 158 .676 .972 1.644		.734 .337 158 .676 .972 1.644	50
45			.685 .277 21 .678 .996 1.172		831 .373 13 773 1 199 1.427	.689 .314 13 .724 .919 1.206	.641 .350 57 608 .977 1.439	.602 .241 131 .583 .835 1.192	.636 .292 235 .620 .884 1.370		.636 .292 235 .620 .884 1.370	45	
40						.510 .290 134 .439 .741 1.189			.525 .275 29 .487 .809 1.059		.513 .287 163 .441 .749 1.148		40
35			.408 .280 25 .375 .742 .991			.258 .193 21 .183 .419 .740					.340 .255 46 .181 .634 .976		35
30	.135 .056 19 .131 .167 .255		.240 .217 19 .158 .418 .808			.128 .062 30 .116 .162 .310					.161 .135 68 .108 .214 .529		30
25	.113 .037 3 .100 .143 .160										.113 .037 3 .100 .143 .160		25
20	.086 .062 9 .093 .117 .211			.041 1			.088 .049 14 .076 .137 .205		.085 .054 24 .065 .127 .226		.085 .054 24 .065 .127 .226		20
15													15
10	.091 .048 3 .062 .128 .156					.052 .022 14 .049 .067 .102			.059 .033 17 .051 .070 .145		.059 .033 17 .051 .070 .145		10
5													5
0													0
5				.039 1					.039 1		.039 1		5
10													10
15							.015 1		.015 1		.015 1		15
20													20
25													25
30													30
35													35
40			.175 .093 48 .165 .245 .423				.180 1		.175 .092 49 .167 .241 .423		.175 .092 49 .167 .241 .423		40
45S													45S
15E	60E	105E	150E	165W	120W	75W	30W	15E					

LONGITUDE

APRIL  
FL 470

		MEAN										LAT
70N												70N
65					1.340 .529 .11 1.388 1.861 2.057						1.340 .529 .11 1.388 1.861 2.057	65
60						.928 .413 .32 .842 1.347 1.788					.928 .413 .32 .842 1.347 1.788	60
55						.765 .277 .30 .781 1.013 1.275	.856 .345 .61 .806 1.224 1.398	.794 .284 .36 .767 1.066 1.416			.817 .316 .127 .781 1.157 1.397	55
50								.833 .394 .158 .814 1.143 2.024			.833 .394 .158 .814 1.143 2.024	50
45			.782 .329 .21 .843 1.142 1.235		.812 .365 .13 .892 1.146 1.527	.872 .361 .13 1.066 1.148 1.342	.691 .336 .57 .687 .974 1.592	.676 .300 .131 .650 .919 1.526			.707 .324 .235 .685 1.049 1.541	45
40						.590 .338 .119 .539 .830 1.437		.574 .316 .29 .547 .932 1.120			.587 .334 .148 .501 .847 1.448	40
35			.462 .300 .25 .350 .763 1.081			.245 .156 .16 .172 .423 .568					.377 .275 .41 .273 .717 .999	35
30		.158 .061 .19 .155 .234 .283		.257 .249 .19 .153 .383 .926		.147 .084 .30 .129 .200 .397					.181 .154 .68 .121 .235 .623	30
25		.128 .041 .3 .105 .159 .182									.128 .041 .3 .105 .159 .182	25
20		.100 .075 .9 .095 .148 .257			.051 1		.096 .043 .14 .086 .154 .181				.095 .058 .24 .077 .160 .234	20
15												15
10		.117 .051 .3 .110 .159 .179				.050 .021 .14 .051 .062 .094					.062 .039 .17 .053 .087 .159	10
5												5
0												0
5				.037 1							.037 1	5
10												10
15							.025 1				.025 1	15
20												20
25												25
30												30
35												35
40			.216 .136 .48 .184 .325 .581				.182 1				.215 .134 .49 .183 .324 .580	40
45S												45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E			

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

APRIL  
FL 490

	MEAN										LAT
70N											70N
65					1.593 .462 .11 1.870 2.025 2.073					1.593 .462 .11 1.870 2.025 2.073	65
60						1.124 .533 .33 1.054 1.787 2.304				1.124 .533 .33 1.054 1.787 2.304	60
55						.906 .410 .30 .868 1.343 1.607	.972 .405 .61 .947 1.396 1.869		.953 .412 .36 .919 1.251 1.992	.951 .409 .127 .909 1.342 1.893	55
50									.953 .461 .158 .889 1.339 2.252	.953 .461 .158 .889 1.339 2.252	50
45		.925 .488 .21 .974 1.403 1.863			.875 .300 .13 .890 1.239 1.374	.937 .310 .13 .953 1.175 1.418	.765 .335 .57 .732 1.019 1.556		.761 .358 .131 .721 1.073 1.680	.793 .366 .235 .542 .932 1.644	45
40						.650 .374 .119 .607 .917 1.671			.661 .367 .29 .559 1.090 1.356	.652 .372 .148 .542 .932 1.644	40
35		.547 .335 .25 .531 .749 1.352				.272 .167 .16 .226 .481 .618				.440 .312 .41 .362 .684 1.229	35
30		.183 .069 .19 .174 .248 .335	.290 .260 .19 .213 .424 .994			.173 .124 .30 .136 .201 .531				.208 .172 .68 .141 .320 .712	30
25		.143 .045 .3 .112 .176 .202								.143 .045 .3 .112 .176 .202	25
20		.115 .089 .9 .097 .182 .305			.060 .1		.101 .036 .14 .102 .127 .169			.104 .062 .24 .087 .139 .271	20
15											15
10		.143 .058 .3 .159 .190 .202				.059 .028 .14 .061 .083 .117				.074 .048 .17 .065 .104 .190	10
5											5
0											0
5				.036 .1						.036 .1	5
10											10
15							.035 .1			.035 .1	15
20											20
25											25
30											30
35											35
40		.229 .128 .48 .195 .306 .599					.382 .1			.232 .128 .49 .196 .317 .598	40
45S											45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

APRIL  
FL 510

MEAN												LAT
70N												70N
65					1.743 .608 11 2.037 2.272 2.491						1.743 .608 11 2.037 2.272 2.491	65
60						1.334 .600 33 1.320 1.878 2.675					1.334 .600 33 1.320 1.878 2.675	60
55						1.089 .540 30 1.036 1.738 2.127	1.112 .429 60 1.010 1.525 2.200	1.077 .404 36 1.057 1.427 1.954		1.097 .452 126 1.015 1.529 2.216		55
50								1.129 .515 158 1.068 1.517 2.576		1.129 .515 158 1.068 1.517 2.576		50
45			1.052 .515 21 1.028 1.461 2.146		.939 .372 13 .859 1.324 1.594	1.064 .343 13 1.112 1.191 1.731	.819 .365 57 .724 1.112 1.723	.895 .433 131 .822 1.268 2.150		.902 .424 235 .836 1.306 2.066		45
40						.702 .361 119 .648 1.063 1.554		.772 .319 29 .735 1.122 1.400		.716 .355 148 .595 1.087 1.433		40
35			.638 .387 25 .569 1.039 1.554			.402 .267 16 .308 .733 .877				.546 .363 41 .466 .871 1.525		35
30		.208 .080 19 .195 .258 .393	.342 .273 18 .204 .537 1.001			.219 .191 30 .163 .265 .666				.249 .204 67 .185 .379 .925		30
25		.158 .049 3 .131 .196 .223								.158 .049 3 .131 .196 .223		25
20		.137 .100 9 .094 .215 .351			.070 1		.117 .048 14 .109 .150 .227			.122 .073 24 .091 .153 .316		20
15												15
10		.169 .069 3 .208 .220 .225				.071 .033 14 .071 .100 .128				.089 .056 17 .074 .126 .220		10
5												5
0												0
5				.050 1						.050 1		5
10												10
15							.045 1			.045 1		15
20												20
25												25
30												30
35												35
40			.296 .143 48 .261 .450 .627				.641 1			.303 .150 49 .276 .480 .641		40
45S												45S
15E 60E 105E 150E 165W 120W 75W 30W 15E												
LONGITUDE												



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

APRIL  
FL 530

	MEAN								LAT
70N									70N
65				1.973 .436 .11 1.931 2.298 2.856				1.973 .436 .11 1.931 2.298 2.856	65
60					1.663 .759 .33 1.536 2.372 3.468			1.663 .759 .33 1.536 2.372 3.468	60
55					1.190 .488 .30 1.156 1.640 2.262	1.340 .427 .60 1.316 1.708 2.248	1.251 .370 .36 1.214 1.666 2.013	1.279 .432 .126 1.200 1.682 2.222	55
50							1.295 .539 .158 1.212 1.759 2.853	1.295 .539 .158 1.212 1.759 2.853	50
45		1.172 .587 .21 1.094 1.839 2.205		1.049 .448 .13 1.968 1.280 2.111	1.222 .536 .13 1.273 1.632 2.222	.978 .384 .57 .875 1.271 2.187	1.030 .437 .131 1.000 1.383 2.261	1.041 .452 .235 .992 1.399 2.281	45
40					.782 .396 .119 .660 1.252 1.715		.911 .316 .29 .851 1.236 1.424	.807 .385 .148 .644 1.251 1.714	40
35		.690 .388 .25 .591 1.010 1.637			.527 .324 .16 .494 .895 1.123			.626 .373 .41 .590 1.025 1.471	35
30	.233 .093 .19 .219 .274 .459	.397 .294 .18 .324 .600 1.105			.263 .161 .30 .195 .328 .686			.291 .204 .67 .219 .472 .876	30
25	.172 .056 .3 .149 .217 .245							.172 .056 .3 .149 .217 .245	25
20	.162 .112 .9 .129 .253 .399			.079 1		.149 .076 .14 .122 .203 .334		.151 .091 .24 .116 .209 .399	20
15									15
10	.195 .082 .3 .249 .254 .257				.081 .028 .14 .062 .111 .126			.101 .061 .17 .084 .122 .254	10
5									5
0									0
5			.098 1					.098 1	5
10									10
15						.049 1		.049 1	15
20									20
25									25
30									30
35									35
40		.393 .185 .48 .366 .513 .684				.632 1		.398 .186 .49 .370 .529 .693	40
45S									45S
15E	60E	105E	150E	165W	120W	75W	30W	15E	
LONGITUDE									

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

APRIL  
FL 550

										MEAN			LAT
70N													70N
65					2.168 .684 11 1.867 2.978 3.155						2.168 .684 11 1.867 2.978 3.155		65
60						1.963 .690 33 1.895 2.682 3.322					1.963 .690 33 1.895 2.682 3.322		60
55						1.324 .455 30 1.222 1.806 2.086	1.632 .464 60 1.581 2.036 2.715	1.476 .402 38 1.416 1.868 2.449		1.514 .462 126 1.447 1.948 2.536		55	
50								1.520 .560 160 1.454 1.951 3.005		1.520 .560 160 1.454 1.951 3.005		50	
45		1.303 .582 21 1.293 1.866 2.432		1.356 .459 13 1.416 1.679 2.319	1.561 .635 13 1.442 2.013 2.762	1.173 .431 57 1.085 1.584 2.310	1.235 .460 130 1.155 1.625 2.539	1.251 .485 234 1.192 1.662 2.534				45	
40						1.010 .384 119 1.909 1.420 2.015		1.131 .306 29 1.109 1.483 1.616		1.034 .373 148 1.119 1.442 1.867		40	
35		.864 .530 25 1.768 1.215 2.235			.707 .434 16 1.570 1.214 1.517					.803 .501 41 1.724 1.214 2.202		35	
30	.353 .197 19 1.338 .435 855	.502 .376 18 1.402 .741 1.399			.348 .196 30 1.260 .515 .913					.391 .266 67 1.301 .590 1.218		30	
25	.235 .049 3 1.209 .273 299									.235 .049 3 1.209 .273 299		25	
20	.272 .158 9 1.206 .468 .517		.148 1			.198 .077 14 1.172 .268 .345				.224 .120 24 1.166 .340 .516		20	
15												15	
10	.223 .096 3 1.285 .293 297				.082 .027 14 1.092 .118 .141					.118 .069 17 1.094 .135 293		10	
5												5	
0												0	
5			.110 1							.110 1		5	
10												10	
15							.123 1			.123 1		15	
20												20	
25												25	
30												30	
35												35	
40		.545 .211 48 1.520 .701 1.102				1.033 1				.555 .220 49 1.523 .723 1.100		40	
45S												45S	
15E 60E 105E 150E 165W 120W 75W 30W 15E													
LONGITUDE													

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

APRIL  
FL 570

	MEAN										LAT
70N											70N
65					2.390 .562 11					2.390 .562 11	65
60					2.374 3.054 3.149					2.374 3.054 3.149	60
55						2.187 .583 33				2.187 .583 33	55
50						2.047 2.893 3.377				2.047 2.893 3.377	50
45							1.715 .491 29	1.878 .599 60	1.796 .449 36	1.816 .539 125	45
40							1.598 2.219 2.702	1.843 2.520 3.114	1.787 2.258 2.782	1.795 2.397 3.102	40
35									1.763 .609 160	1.763 .609 160	35
30									1.680 2.210 3.544	1.680 2.210 3.544	30
25					1.509 .605 21	1.669 .547 13	1.455 .343 13	1.409 .541 57	1.507 .472 130	1.489 .505 234	25
20					1.347 2.057 2.825	1.411 2.221 2.647	1.536 1.700 1.958	1.281 1.965 2.735	1.440 1.885 2.798	1.259 1.934 2.787	20
15							1.219 .353 119		1.380 .401 29	1.251 .368 148	15
10							1.213 1.570 1.913		1.304 1.740 2.216	1.162 1.620 1.958	10
5											5
0											0
5											5
10											10
15											15
20											20
25											25
30											30
35											35
40											40
45S											45S
15E	60E	105E	150E	165W	120W	75W	30W	15E			
LONGITUDE											

APRIL  
FL 590

MEAN												LAT
70N												70N
65					2.495 .391 11 2.474 2.879 3.135							65
60						2.561 .613 33 2.332 3.237 3.836						60
55						1.976 .332 29 1.986 2.333 2.609	2.204 .567 60 2.224 2.716 3.392	2.230 .491 36 2.101 2.621 3.236				55
50								2.046 .640 160 1.958 2.394 3.227				50
45			1.797 .623 21 1.878 2.389 3.129		2.066 .528 13 2.281 2.636 2.771	1.757 .497 13 1.430 2.318 2.658	1.785 .486 57 1.715 2.229 2.751	1.830 .473 130 1.799 2.207 3.054				45
40						1.436 .333 119 1.430 1.802 2.018		1.616 .445 28 1.593 2.045 2.518				40
35			1.206 .550 25 1.067 1.515 2.678			1.045 .292 16 1.020 1.386 1.499						35
30		.731 .303 19 .785 .954 1.285	.812 .525 18 .692 1.089 2.113			.664 .324 30 .556 .956 1.454						30
25		.641 .056 3 .631 .687 .711										25
20		.670 .345 9 .647 .889 1.346			.451 1		.413 .127 14 .379 .547 .675					20
15												15
10		.383 .111 3 .345 .433 .501				.268 .094 14 .270 .375 422						10
5												5
0												0
5				.269 1								5
10												10
15							.412 1					15
20												20
25												25
30												30
35												35
40			1.086 .330 48 1.063 1.355 1.787				1.518 1					40
45S												45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E			
	LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MAY  
FL 190

	MEAN										LAT
70N											70N
65					.047 .019 12 .041 .068 .081					.047 .019 12 .041 .068 .081	65
60						.054 .014 35 .054 .070 .080				.054 .014 35 .054 .070 .080	60
55						.057 .020 32 .061 .072 .094	.064 .022 70 .064 .083 .116	.061 .011 33 .061 .070 .080		.062 .020 135 .062 .074 .095	55
50								.060 .018 106 .057 .075 .102		.060 .018 106 .057 .075 .102	50
45			.074 .017 17 .075 .092 .108		.041 .019 21 .039 .060 .078	.074 .012 5 .072 .084 .094	.056 .014 58 .058 .069 .083	.052 .012 129 .052 .064 .078		.054 .016 230 .050 .069 .090	45
40					.045 .035 2 .045 .069 .079	.057 .019 135 .055 .074 .098	.050 .011 2 .050 .057 .061	.056 .017 34 .052 .073 .091		.056 .019 173 .055 .074 .098	40
35			.078 .026 23 .075 .099 .138			.036 .012 20 .035 .044 .063		.103 .037 17 .091 .142 .184		.071 .038 60 .056 .100 .173	35
30	.042 .013 6 .045 .054 .056		.067 .019 19 .064 .088 .106			.050 .013 33 .051 .063 .079				.055 .018 58 .047 .071 .092	30
25											25
20	.044 .009 6 .045 .052 .057						.052 .014 12 .046 .068 .077			.049 .013 18 .043 .063 .077	20
15			.047 .001 2 .047 .048 .048			.035 .002 2 .035 .036 .037				.041 .007 4 .042 .047 .048	15
10						.032 .013 16 .029 .049 .055	.053 .028 3 .064 .075 .079			.035 .018 19 .034 .052 .074	10
5	.008 1									.008 1	5
0	.031 .009 3 .028 .038 .042									.031 .009 3 .028 .038 .042	0
5				.012 .004 3 .010 .015 .018						.012 .004 3 .010 .015 .018	5
10											10
15							.961 1			.961 1	15
20					.038 1					.038 1	20
25											25
30											30
35											35
40			.032 .007 54 .032 .040 .045				.016 1			.032 .008 55 .031 .040 .045	40
45S											45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

		MEAN														
70N																70N
65																65
60																60
55																55
50																50
45																45
40																40
35																35
30																30
25																25
20																20
15																15
10																10
5																5
0																0
5																5
10																10
15																15
20																20
25																25
30																30
35																35

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MAY  
FL 230

	MEAN										LAT
70N											70N
65					.047 .016 12 .048 .064 .069					.047 .016 12 .047 .064 .069	65
60						.065 .028 35 .061 .084 .144				.065 .028 35 .061 .084 .144	60
55						.065 .028 32 .063 .076 .131	.076 .031 70 .071 .090 .169	.069 .018 33 .067 .080 .110		.072 .028 135 .068 .086 .146	55
50								.066 .022 109 .061 .088 .117		.066 .022 109 .061 .088 .117	50
45			.081 .026 17 .059 .108 .137		.054 .029 21 .042 .084 .116	.078 .027 5 .068 .095 .125	.060 .018 60 .061 .074 .096	.055 .015 129 .053 .069 .091		.059 .020 232 .051 .074 .115	45
40					.063 .014 4 .062 .076 .083	.061 .020 154 .060 .079 .108	.068 .019 10 .065 .093 .094	.060 .020 34 .059 .074 .110		.061 .020 202 .057 .080 .108	40
35			.080 .033 24 .078 .095 .161		.024 .009 3 .021 .031 .035	.050 .022 31 .045 .066 .100	.082 1	.109 .041 17 .097 .154 .190		.072 .039 76 .061 .097 .172	35
30	.048 .018 6 .051 .061 .070		.069 .022 19 .054 .082 .121			.058 .022 34 .058 .072 .110				.061 .022 59 .059 .075 .126	30
25						.021 1				.021 1	25
20	.048 .015 5 .047 .066 .068		.070 1		.053 .028 9 .052 .084 .097		.058 .022 12 .052 .077 .105			.055 .023 28 .041 .076 .103	20
15			.040 .011 6 .043 .050 .051			.036 .011 5 .039 .046 .050				.038 .011 11 .039 .050 .051	15
10						.029 .013 16 .032 .038 .050	.010 .011 5 .006 .015 .029			.025 .015 21 .026 .037 .050	10
5	.010 1									.010 1	5
0	.032 .011 4 .030 .042 .048									.032 .011 4 .030 .042 .048	0
5				.013 .004 3 .013 .016 .018						.013 .004 3 .013 .016 .018	5
10											10
15					.068 1		.641 1			.355 .287 2 .355 .549 .630	15
20							.017 .013 4 .011 .027 .038			.017 .013 4 .011 .027 .038	20
25							.012 .009 3 .014 .019 .021			.012 .009 3 .014 .019 .021	25
30											30
35			.021 1	.040 1						.031 .009 2 .031 .037 .040	35
40			.034 .010 54 .034 .042 .053				.021 1			.034 .010 55 .034 .042 .053	40
45S											45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

LONGITUDE



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MAY  
FL 270

	MEAN								LAT
70N									70N
65				.084 .046 12 .067 .149 .166				.084 .046 12 .067 .149 .166	65
60					.096 .062 35 .072 .141 .282			.096 .062 35 .072 .141 .282	60
55					.076 .041 32 .069 .098 .179	.106 .064 70 .082 .155 .299	.091 .069 34 .075 .100 .352	.095 .062 136 .071 .140 .311	55
50				.180 1			.075 .033 109 .066 .103 .158	.076 .035 110 .067 .105 .176	50
45		.112 .075 17 .078 .207 .278		.080 .048 21 .062 .117 .190	.096 .042 6 .083 .114 .177	.067 .030 59 .065 .085 .102	.067 .050 129 .059 .084 .161	.072 .049 232 .055 .089 .208	45
40				.051 .010 2 .051 .057 .060	.071 .036 140 .063 .094 .188	.014 1	.071 .028 34 .066 .108 .130	.071 .035 177 .063 .095 .177	40
35		.082 .020 26 .082 .106 .112		.070 .045 3 .039 .104 .130	.052 .024 26 .051 .078 .107		.185 .105 17 .149 .275 .409	.095 .075 72 .072 .123 .336	35
30	.054 .025 7 .054 .066 .096	.073 .024 19 .070 .098 .115			.058 .021 34 .057 .073 .115			.052 .024 60 .055 .085 .117	30
25									25
20	.045 .019 7 .038 .067 .077			.058 .023 6 .064 .076 .088		.051 .019 12 .047 .071 .087		.051 .021 25 .048 .073 .089	20
15	.035 1	.023 .008 2 .023 .028 .030			.022 .014 2 .022 .031 .034			.025 .011 5 .030 .035 .035	15
10					.032 .006 16 .031 .039 .044	.028 1		.032 .006 17 .031 .038 .043	10
5	.025 .008 2 .025 .030 .033							.025 .008 2 .025 .030 .033	5
0	.039 .011 3 .033 .048 .054							.039 .011 3 .033 .048 .054	0
5			.012 .005 3 .009 .016 .019					.012 .005 3 .009 .016 .019	5
10									10
15				.003 1		.310 1		.157 .154 2 .157 .261 .304	15
20			.038 1			.019 1		.029 .010 2 .029 .035 .038	20
25						.025 1		.025 1	25
30									30
35			.033 1					.033 1	35
40		.038 .016 55 .034 .046 .082				.026 1		.037 .016 56 .034 .045 .082	40
45S									45S

15E

60E

105E

150E

165W

120W

75W

30W

15E

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MAY  
FL 290

	MEAN										LAT
70N											70N
65					.141 .103 .12					.141 .103 .12	65
60					.091 .237 .339					.091 .237 .339	60
55						.129 .097 .35				.129 .097 .35	55
50						.085 .224 .360				.085 .224 .360	50
45						.089 .064 .32	.137 .096 .70	.095 .064 .38	.114 .089 .140		45
40						.073 .115 .279	.092 .236 .392	.072 .105 .429	.076 .192 .412		40
35								.079 .042 .120	.079 .042 .120		35
30								.069 .106 .222	.068 .106 .222		30
25	.074 .028 .9		.130 .105 .17		.105 .082 .22	.108 .054 .6	.076 .048 .59	.075 .076 .133	.082 .073 .246		25
20	.060 .103 .110		.082 .225 .375		.069 .217 .269	.079 .144 .212	.070 .092 .200	.061 .094 .197	.054 .104 .276		20
15	.053 .044 .14				.038 .031 .2	.082 .062 .145	.054 .044 .13	.078 .038 .34	.077 .057 .208		15
10	.036 .092 .161				.038 .058 .067	.065 .104 .271	.050 .073 .161	.066 .120 .159	.062 .104 .234		10
5	.032 .014 .4		.082 .031 .25		.078 .034 .7	.051 .023 .23	.063 .011 .3	.262 .177 .17	.108 .118 .80		5
0	.028 .042 .053		.079 .112 .148		.078 .116 .127	.049 .067 .108	.068 .071 .073	.183 .429 .659	.072 .141 .488		0
5		.060 .033 .6	.075 .029 .19			.065 .027 .35	.071 .004 .2		.068 .028 .62		5
10		.061 .079 .116	.074 .101 .129			.062 .083 .125	.071 .074 .075		.059 .097 .129		10
15	.054 .1	.039 .004 .2	.037 .1		.056 .017 .3	.064 .1	.042 .1		.049 .014 .9		15
20		.039 .042 .043			.068 .069 .069				.043 .067 .069		20
25		.048 .017 .9	.057 .020 .3		.058 .022 .17		.055 .017 .12		.055 .020 .41		25
30		.043 .062 .078	.059 .074 .080		.058 .061 .099		.052 .070 .088		.053 .079 .092		30
35		.041 .004 .3	.048 .008 .4			.023 .1			.042 .010 .8		35
40		.043 .044 .044	.051 .054 .056						.034 .052 .055		40
45		.034 .012 .2	.029 .002 .2			.030 .011 .17	.036 .021 .5		.031 .013 .26		45
50		.034 .042 .046	.029 .030 .031			.028 .040 .051	.021 .061 .064		.028 .046 .062		50
55		.019 .1	.016 .000 .2						.017 .002 .3		55
60			.016 .016 .016						.016 .018 .019		60
65		.041 .012 .3	.015 .004 .3						.028 .016 .6		65
70		.033 .050 .057	.013 .018 .020						.026 .038 .056		70
75			.019 .001 .2	.012 .005 .3					.014 .005 .5		75
80			.019 .019 .019	.009 .016 .019					.018 .019 .019		80
85			.032 .1						.032 .1		85
90				.038 .010 .2			.141 .1		.072 .049 .3		90
95				.038 .044 .047					.047 .111 .137		95
100							.024 .002 .2		.024 .002 .2		100
105							.024 .025 .026		.024 .025 .026		105
110							.010 .000 .2		.010 .000 .2		110
115							.010 .010 .010		.010 .010 .010		115
120			.026 .009 .2						.026 .009 .2		120
125			.026 .032 .035						.026 .032 .035		125
130			.023 .1	.022 .010 .4					.022 .009 .5		130
135				.022 .029 .035					.022 .028 .035		135
140			.040 .022 .55				.028 .1		.040 .022 .56		140
145			.036 .048 .131						.036 .048 .130		145
150											150
155											155

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MAY  
FL 310

	MEAN										LAT
70N											70N
65					.210 .163 .13 .199 .408 .469					.210 .163 .13 .199 .408 .469	65
60						.174 .143 .35 .066 .357 .462	.022 .004 .4 .022 .025 .028	.068 .042 .5 .042 .118 .119		.149 .139 .44 .079 .339 .449	60
55						.119 .089 .32 .079 .258 .309	.181 .143 .73 .098 .377 .478	.138 .135 .48 .079 .278 .489		.155 .134 .153 .089 .320 .487	55
50					.012 .1		.156 .071 .6 .183 .208 .245	.099 .065 .119 .077 .136 .301		.101 .067 .126 .079 .141 .296	50
45			.166 .132 .17 .092 .308 .444		.144 .122 .25 .091 .270 .406	.170 .179 .7 .097 .170 .550	.087 .065 .64 .075 .107 .243	.101 .102 .131 .074 .137 .337		.108 .105 .244 .063 .153 .423	45
40	.077 .021 .5 .070 .096 .111				.027 .023 .8 .020 .057 .068	.089 .067 .162 .072 .118 .302	.072 .045 .5 .066 .102 .147	.081 .043 .34 .071 .118 .186		.084 .062 .214 .068 .115 .278	40
35	.060 .023 .7 .073 .077 .081		.082 .036 .30 .080 .127 .180	.087 .1	.058 .056 .19 .048 .083 .213	.079 .058 .21 .067 .151 .211			.308 .203 .17 .233 .520 .707	.119 .131 .95 .075 .176 .530	35
30	.041 .008 .4 .044 .046 .048	.073 .032 .10 .073 .099 .125	.076 .028 .19 .079 .105 .119		.061 .028 .11 .068 .085 .098	.062 .021 .35 .064 .083 .097				.085 .026 .79 .068 .091 .119	30
25	.045 .000 .2 .045 .045 .045	.040 .004 .3 .038 .043 .045		.041 .008 .4 .041 .047 .052	.046 .021 .9 .049 .062 .079		.036 .1			.043 .015 .19 .041 .054 .075	25
20		.064 .020 .6 .064 .080 .091	.080 .006 .3 .081 .085 .087		.045 .022 .24 .049 .072 .079		.057 .020 .13 .051 .081 .090			.053 .023 .46 .052 .077 .091	20
15		.043 .1	.033 .015 .8 .036 .046 .049		.040 .016 .7 .038 .047 .069	.023 .018 .6 .021 .044 .048				.033 .017 .22 .030 .046 .063	15
10		.040 .001 .2 .040 .040 .040		.020 .1	.020 .004 .2 .020 .022 .023	.030 .012 .18 .028 .043 .055	.011 .008 .5 .013 .019 .020			.026 .013 .28 .024 .040 .052	10
5		.022 .011 .3 .020 .031 .035		.014 .014 .2 .014 .023 .026		.013 .005 .2 .013 .016 .017				.017 .011 .7 .017 .027 .035	5
0		.046 .019 .3 .034 .061 .071								.046 .019 .3 .034 .061 .071	0
5				.012 .005 .3 .010 .016 .019						.012 .005 .3 .010 .016 .019	5
10							.018 .004 .2 .018 .020 .021			.018 .004 .2 .018 .020 .021	10
15				.034 .003 .3 .034 .036 .037	.020 .014 .3 .028 .031 .032		.030 .015 .3 .027 .043 .049			.028 .013 .9 .030 .036 .048	15
20		.029 .001 .2 .029 .030 .030	.034 .009 .2 .034 .040 .043				.022 .1			.030 .007 .5 .028 .035 .042	20
25		.036 .006 .6 .036 .041 .046								.036 .006 .6 .036 .041 .046	25
30		.039 .010 .4 .043 .046 .047	.029 .008 .2 .029 .034 .037							.035 .010 .6 .031 .045 .047	30
35		.044 .046 .9 .029 .036 .153	.055 .051 .11 .035 .091 .175				.036 .1			.050 .048 .21 .029 .070 .185	35
40		.046 .031 .55 .041 .056 .162					.072 .1			.047 .031 .56 .041 .059 .161	40
45S											45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MAY  
FL 330

												MEAN			LAT		
70N																	70N
65																	65
60																	60
55																	55
50																	50
45																	45
40																	40
35																	35
30																	30
25																	25
20																	20
15																	15
10																	10
5																	5
0																	0
5																	5
10																	10
15																	15
20																	20
25																	25
30																	30
35																	35
40																	40
45S																	45S
15E	60E	105E	150E	165W	120W	75W	30W	15E									
LONGITUDE																	

MEAN	ST. DEV.	N
50%	84%	98%

MEAN

LAT

[illegible]

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MAY  
FL 370

	MEAN										LAT
70N											70N
65					.532 .291 13	.657 .022 4	.445 .108 5	.583 .082 5	.544 .220 27		65
					.514 .856 .922	.659 .673 .684	.385 .573 .582	.637 .651 .668	.568 .690 .921		
60				.617 .109 10	.510 .138 33	.514 .236 40	.365 .204 13	.618 .035 10	.514 .195 106		60
				.637 .721 .742	.533 .637 .672	.590 .714 .874	.394 .624 .675	.619 .635 .679	.439 .662 .795		
55				.378 .269 27	.473 .268 17	.380 .214 44	.394 .203 99	.271 .180 64	.364 .220 251		55
				.421 .638 .736	.604 .693 .818	.430 .631 .702	.360 .579 .698	.249 .450 .686	.348 .622 .790		
50				.390 .294 12	.464 .244 9	.442 .201 7	.232 .125 49	.285 .161 163	.291 .178 240		50
				.381 .673 .829	.605 .656 .724	.583 .605 .646	.225 .353 .516	.261 .466 .632	.243 .478 .657		
45	.211 .173 5		.372 .221 17	.292 .290 16	.413 .266 34	.300 .234 20	.235 .193 86	.269 .166 140	.283 .209 318		45
	.170 .390 .463		.350 .611 .732	.092 .724 .807	.367 .711 .880	.207 .591 .800	.175 .406 .752	.234 .453 .576	.149 .496 .778		
40	.182 .123 10		.076 .019 6	.194 .212 26	.123 .131 26	.193 .165 285	.347 .203 11	.203 .170 34	.192 .169 398		40
	.159 .256 .442		.078 .097 .101	.092 .240 .758	.070 .187 .489	.122 .366 .616	.292 .560 .652	.121 .385 .658	.092 .272 .653		
35	.089 .024 7		.125 .089 44	.117 .019 3	.119 .092 74	.129 .092 53	.054 .012 2	.552 .134 17	.158 .152 200		35
	.096 .108 .119		.096 .178 .360	.117 .133 .139	.089 .171 .364	.104 .201 .352	.054 .062 .066	.490 .702 .814	.092 .272 .653		
30	.041 .016 6	.073 .075 12	.104 .060 26	.072 .033 9	.094 .082 109	.094 .072 40			.091 .075 202		30
	.042 .050 .068	.048 .098 .260	.093 .165 .232	.067 .110 .120	.071 .110 .360	.085 .121 .245			.072 .120 .355		
25	.078 1	.062 .022 7	.087 .039 6	.049 .041 4	.069 .027 89	.032 .023 10	.071 1		.065 .030 118		25
		.048 .090 .099	.072 .110 .160	.038 .086 .108	.065 .097 .127	.026 .046 .081			.060 .095 .134		
20		.077 .042 13	.057 .022 5	.066 .035 9	.064 .032 27	.038 .032 14	.072 .031 14		.063 .036 82		20
		.068 .083 .184	.062 .079 .082	.057 .097 .124	.058 .089 .132	.033 .063 .113	.065 .095 .140		.057 .089 .144		
15		.065 .004 5	.043 .020 6	.074 .030 2	.050 .033 10	.033 .016 16	.063 .026 2		.046 .026 41		15
		.063 .068 .071	.038 .069 .069	.074 .094 .103	.030 .089 .096	.032 .050 .056	.063 .080 .087		.042 .070 .099		
10					.043 .024 12	.043 .019 20	.032 .020 7		.041 .022 39		10
					.035 .058 .093	.043 .053 .089	.043 .050 .054		.043 .053 .095		
5	.024 1				.035 .020 15	.013 1	.021 .015 10		.028 .019 27		5
					.030 .035 .088		.020 .033 .049		.027 .035 .078		
0	.068 .023 3		.028 .004 3	.031 .005 14			.013 .009 12		.028 .018 32		0
	.063 .067 .096		.028 .031 .032	.031 .035 .041			.016 .022 .027		.027 .035 .077		
5			.024 .012 7	.039 .011 9			.016 .009 11		.026 .014 27		5
			.027 .034 .042	.035 .047 .061			.015 .024 .031		.026 .040 .056		
10			.038 .018 12	.028 .028 5			.019 .011 10		.029 .020 27		10
			.036 .059 .066	.028 .053 .072			.018 .028 .038		.025 .047 .071		
15			.034 .015 12	.016 .011 3			.021 .010 12		.026 .015 27		15
			.028 .052 .066	.023 .024 .024			.019 .035 .038		.024 .037 .063		
20			.037 .018 9				.023 .011 12		.029 .016 21		20
			.026 .060 .068				.026 .032 .039		.026 .039 .067		
25		.023 1	.033 .006 3				.040 .000 2		.034 .007 6		25
			.029 .037 .041				.040 .040 .040		.035 .040 .041		
30		.025 .003 2	.048 .016 3				.037 .011 2		.038 .015 7		30
		.025 .027 .028	.049 .061 .066				.037 .044 .047		.029 .050 .065		
35		.047 .040 7	.084 .042 5						.063 .045 12		35
		.028 .057 .130	.076 .130 .131						.038 .130 .139		
40		.102 .064 55					.227 1		.104 .066 56		40
		.085 .155 .287							.085 .159 .286		
45S											45S

15E

60E

105E

150E

165W

120W

75W

30W

15E

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MAY  
FL 390

	MEAN										LAT
70N											70N
65											65
60											60
55											55
50											50
45											45
40											40
35											35
30											30
25											25
20											20
15											15
10											10
5											5
0											0
5											5
10											10
15											15
20											20
25											25
30											30
35											35
40											40
45S											45S
15E	60E	105E	150E	165W	120W	75W	30W	15E			
LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MAY  
FL 410

		MEAN												LAT															
70N																70N													
65								.718 .698	.213 .894	12 1.081				.577	1	.707 .692	.208 .875	13 1.079	65										
60								.578 .531	.102 .660	3 .712	.685 .745	.226 .889	39 .996	.679 .699	.050 .719	11 .759	.698 .728	.158 .828	11 .919	.681 .640	.192 .877	64 .984	60						
55											.643 .645	.090 .705	9 .762	.571 .632	.205 .742	43 .949	.622 .588	.237 .863	78 1.159	.557 .575	.170 .727	45 .847	.594 .586	.210 .792	175 1.021	55			
50								.622 .616	.221 .756	25 1.052	.349 .322	.193 .563	8 .617	.686 .683	.209 .552	8 .977	.514 .500	.075 .580	6 .631	.501 .508	.166 .842	118 .830	.522 .537	.190 .676	165 .977	50			
45								.540 .529	.208 .734	21 .899	.518 .557	.202 .662	25 .780	.528 .564	.266 .852	51 1.003	.412 .409	.173 .596	26 .717	.420 .425	.270 .630	67 1.134	.454 .459	.186 .637	128 .878	.466 .446	.226 .666	318 .946	45
40	.330 .307	.033 .355	3 .374					.394 .467	.207 .581	19 .701	.065 .065	.012 .072	2 .076	.356 .323	.205 .604	19 .711	.326 .284	.196 .534	172 .777	.328 .328	.083 .384	2 .407	.331 .327	.200 .510	35 .776	.332 .293	.198 .633	252 .860	40
35	.234 .229	.070 .295	4 .330					.237 .203	.156 .389	33 .579				.393 .336	.269 .690	8 .813	.246 .187	.170 .504	46 .600	.173 .197	.049 .211	3 .217	.743 .706	.105 .842	17 .988	.328 .216	.243 .633	111 .860	35
30	.212 .262	.076 .267	3 .269	.118 .081	.116 .163	6 .342		.133 .112	.081 .192	26 .338				.199 .139	.153 .385	19 .528	.166 .115	.143 .271	37 .531	.106 .106	.005 .109	2 .110				.160 .115	.129 .265	93 .487	30
25								.086 .080	.017 .099	6 .116				.128 .110	.077 .179	15 .316			.088 .088	.011 .095	2 .099					.114 .099	.066 .151	23 .291	25
20								.111 .076	.085 .154	6 .274				.068 .063	.010 .080	5 .082			.080 .071	.051 .088	14 .211					.079 .049	.054 .106	36 .259	20
15								.052 .047	.013 .061	5 .076				.048 .036	.028 .078	12 .104			.100		1					.052 .036	.026 .082	18 .105	15
10								.036 .034	.011 .046	4 .050				.033 .032	.019 .043	12 .073	.079 .046	.122 .072	15 .409							.056 .040	.089 .055	31 .272	10
5								.028	1					.039 .039	.010 .045	2 .046										.030 .028	.015 .048	14 .052	5
0								.069 .069	.017 .083	3 .088				.035 .034	.010 .040	7 .052	.043 .040	.008 .049	4 .054							.044 .037	.017 .055	14 .084	



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MAY  
FL 430

	MEAN										LAT														
70N											70N														
65					764	.216	12			764	.216	12	65												
60					775	.934	1	151		775	.934	1	151	60											
55									773	.242	35		773	.242	35	55									
50									771	1	013	1	115	771	1	013	1	115	50						
45									611	.220	32		697	.258	74	620	.180	34	659	.236	140	45			
40									607	.802	1	051	690	.914	1	244	613	.749	.992	599	.898	1	214	40	
35									938	.063	2		384	.111	4		555	.196	110	555	.201	118	35		
30					291		1	546		938	.981	.998	335	.459	.560		555	.702	1	006	551	.706	1	007	30
25													475	.238	.62		503	.182	128	521	.214	245	25		
20													493	.728	1	035	513	.659	.962	406	.729	1	002	20	
15																	374	.188	34	368	.195	200	15		
10																	391	.553	.709	330	.556	.808	10		
5																								5	
0																								0	
5																								5	
10																								10	
15																								15	
20																								20	
25																								25	
30																								30	
35																								35	
40																								40	
45S																								45S	

MAY  
FL 450

										MEAN			LAT
70N													70N
65					.775 .235 12 .717 .998 1.190							.775 .235 12 .717 .998 1.190	65
60						.826 .291 35 .920 1.115 1.276						.826 .291 35 .920 1.115 1.276	60
55						.664 .218 32 .708 .834 1.110	.753 .299 89 .760 .968 1.431		.656 .187 33 .623 .853 1.007		.708 .261 134 .697 .853 1.362		55
50									.629 .245 110 .622 .834 1.300		.629 .245 110 .622 .834 1.300		50
45			.570 .181 16 .526 .733 .946		.815 .282 21 .852 1.062 1.234	.624 .309 5 .585 .822 1.151	.515 .256 58 .461 .784 1.098		.540 .192 128 .545 .734 .988		.563 .237 228 .493 .785 1.145		45
40						.422 .203 133 .403 .586 901			.404 .195 34 .400 .619 728		.418 .202 167 .402 .593 .876		40
35			.321 .171 23 .243 .522 .638			.293 .249 19 .168 .472 925			.857 .083 17 .835 .933 1.034		.466 .309 59 .413 .834 1.039		35
30		.102 .084 6 .084 .134 .258	.161 .097 18 .138 .253 .392			.193 .100 33 .146 .301 .391					.173 .101 57 .134 .282 .394		30
25													25
20		.137 .108 6 .091 .189 .347						.101 .039 12 .081 .151 .172			.113 .072 18 .077 .151 .304		20
15													15
10						.116 .239 15 .054 .086 .750					.116 .239 15 .054 .086 .750		10
5		.112 1									.112 1		5
0		.126 .069 3 .105 .183 .215									.126 .069 3 .105 .183 .215		0
5				.039 .009 3 .040 .046 .049							.039 .009 3 .040 .046 .049		5
10													10
15							.068 1				.068 1		15
20													20
25													25
30													30
35													35
40			.251 .155 54 .200 .410 .642					.335 1			.252 .154 55 .202 .408 .642		40
45S													45S
<div>15E 60E 105E 150E 165W 120W 75W 30W 15E</div> <div>LONGITUDE</div>													

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MAY  
FL 470

	MEAN										LAT
70N											70N
65					1.105	.285	.12				65
60					1.138	1.369	1.496				60
55											55
50											50
45											45
40											40
35											35
30											30
25											25
20											20
15											15
10											10
5											5
0											0
5											5
10											10
15											15
20											20
25											25
30											30
35											35
40											40
45S											45S
15E	60E	105E	150E	165W	120W	75W	30W	15E			
LONGITUDE											

MAY  
FL 490

													MEAN			LAT		
70N																		70N
65																		65
60																		60
55																		55
50																		50
45																		45
40																		40
35																		35
30																		30
25																		25
20																		20
15																		15
10																		10
5																		5
0																		0
5																		5
10																		10
15																		15
20																		20
25																		25
30																		30
35																		35
40																		40
45S																		45S
15E	60E	105E	150E	165W	120W	75W	30W	15E										
LONGITUDE																		

CODE: MEAN ST. DEV. N  
50% 84% 98%

MAY  
FL 510

	MEAN								LAT
70N									70N
65				1.458 .402 12 1.349 1.888 2.240				1.458 .402 12 1.349 1.888 2.240	65
60					1.166 .435 35 1.058 1.643 2.056			1.166 .435 35 1.058 1.643 2.056	60
55					.819 .310 32 .815 1.123 1.328	1.037 .416 69 1.001 1.321 1.898	.921 .319 33 .929 1.200 1.568	.956 .381 134 .904 1.257 1.814	55
50							.870 .451 110 .791 1.136 2.543	.870 .451 110 .791 1.136 2.543	50
45		.896 .326 16 1.003 1.150 1.402		1.333 .358 21 1.372 1.733 1.792	1.040 .454 5 .855 1.566 1.617	.829 .375 58 .774 1.249 1.573	.781 .291 128 .760 1.043 1.459	.858 .364 228 .729 1.222 1.707	45
40					.596 .286 133 .543 .826 1.370		.584 .283 34 .509 .906 1.168	.594 .286 167 .539 .836 1.341	40
35			.416 .221 23 .339 .696 .893		.392 .172 19 .404 .600 .688		1.253 .153 16 1.239 1.363 1.581	.639 .424 58 .494 1.232 1.464	35
30	.178 .089 5 .180 .249 321		.205 .096 18 .182 .232 .468		.292 .144 33 .296 .435 574			.254 .134 56 .171 .423 .552	30
25									25
20	.188 .145 6 .135 .278 .464					.168 .075 12 .144 .252 .326		.175 .104 18 .131 .254 .438	20
15									15
10					.179 .413 15 .077 .096 1.268			.179 .413 15 .077 .096 1.268	10
5	.092 1							.092 1	5
0	.173 .083 3 .131 .238 .282							.173 .083 3 .131 .238 .282	0
5			.074 .028 3 .084 .097 .102					.074 .028 3 .084 .097 .102	5
10									10
15						.108 1		.108 1	15
20									20
25									25
30									30
35									35
40		.470 .245 54 .421 .736 .981				.491 1		.470 .243 55 .426 .733 .981	40
45S									45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
	LONGITUDE								

MAY  
FL 530

		MEAN										LAT
70N												70N
65					1.658 .485 12 1.715 2.027 2.536						1.658 .485 12 1.715 2.027 2.536	65
60						1.411 .489 35 1.365 1.958 2.270					1.411 .489 35 1.365 1.958 2.270	60
55						.960 .300 32 .969 1.244 1.542	1.222 .456 69 1.193 1.655 2.245	1.047 .276 33 1.046 1.250 1.553		1.116 .400 134 .996 1.478 2.143		55
50								1.010 .465 110 .971 1.268 2.444		1.010 .465 110 .969 1.268 2.444		50
45			.981 .338 16 .959 1.346 1.493		1.395 .550 21 1.309 1.939 2.372	1.243 .570 5 1.596 1.726 1.627	1.000 .369 58 .967 1.391 1.754	.930 .296 128 .915 1.202 1.558		1.001 .386 228 .880 1.360 1.923		45
40						.689 .327 133 .622 .948 1.497		.733 .359 34 .715 1.124 1.405		.698 .334 167 .625 .973 1.504		40
35			.512 .249 23 .434 .774 1.077			.430 .193 19 .455 .583 .645		1.379 .184 16 1.389 1.510 1.782		.724 .459 58 .537 1.339 1.622		35
30		.197 .096 5 .208 .278 .340	.251 .119 16 .218 .312 .572			.357 .210 33 .300 .499 .853				.309 .187 56 .214 .467 .658		30
25												25
20		.218 .160 6 .172 .332 .505					.229 .126 12 .172 .342 .513			.225 .138 18 .167 .345 .541		20
15												15
10						.214 .467 15 .101 .129 1.447				.214 .467 15 .101 .129 1.447		10
5		.128 1								.128 1		5
0		.186 .090 3 .149 .258 .303								.186 .090 3 .149 .258 .303		0
5				.114 .019 3 .128 .128 .128						.114 .019 3 .128 .128 .128		5
10												10
15							.186 1			.186 1		15
20												20
25												25
30												30
35												35
40			.562 .274 54 .513 .876 1.175				.816 1			.567 .273 55 .518 .870 1.174		40
45S												45S
		15E	60E	105E	150E	165W	120W	75W	30W	15E		

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MAY  
FL 550

	MEAN								LAT
70N									70N
65				1.905 .436 12 2.072 2.307 2.419				1.905 .436 12 2.072 2.307 2.419	65
60					1.627 .589 35 1.672 2.208 2.932			1.627 .589 35 1.672 2.208 2.932	60
55					1.228 .386 32 1.199 1.583 2.070	1.474 .507 69 1.432 1.978 2.508	1.184 .308 33 1.181 1.495 1.777	1.344 .458 134 1.216 1.775 2.401	55
50							1.234 .523 110 1.127 1.530 2.804	1.234 .523 110 1.127 1.530 2.804	50
45		1.123 .284 16 1.088 1.471 1.646		1.704 .487 21 1.719 2.256 2.461	1.310 .497 5 1.115 1.694 2.149	1.198 .447 58 1.142 1.777 2.111	1.143 .287 128 1.126 1.411 1.863	1.211 .395 228 1.081 1.546 2.247	45
40					.863 .397 133 .763 1.143 1.872		.887 .347 34 .909 1.220 1.562	.868 .387 167 .799 1.180 1.745	40
35		.636 .234 23 .608 .889 1.057		.487 .243 19 .417 .682 1.056			1.496 .328 16 1.494 1.855 2.017	.824 .497 58 .640 1.448 1.953	35
30	.259 .144 5 .249 .407 .458	.360 .195 18 .327 .464 .852		.464 .216 33 .473 .724 .871				.413 .216 56 .306 .616 1.020	30
25									25
20	.290 .152 6 .276 .389 .547					.289 .146 12 .221 .489 .528		.289 .146 12 .216 .491 .556	20
15									15
10					.270 .516 15 .129 .179 1.635			.270 .516 15 .129 .179 1.635	10
5	.103 1							.103 1	5
0	.204 .099 3 .174 .285 .330							.204 .099 3 .174 .285 .330	0
5			.135 .042 3 .151 .169 .176					.135 .042 3 .151 .169 .176	5
10									10
15						4.216 1		4.216 1	15
20									20
25									25
30									30
35									35
40		.762 .322 54 .707 1.142 1.460				.875 1		.764 .320 55 .715 1.135 1.459	40
45S									45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
	LONGITUDE								

**CODE:**

MEAN	ST. DEV.	N
50%	84%	98%

MAY  
FL 570

MEAN											LAT
70N											70N
65					2.402 .437 12 2.337 2.821 3.169					2.402 .437 12 2.337 2.821 3.169	65
60						2.007 .616 35 2.018 2.681 3.048				2.007 .616 35 2.018 2.681 3.048	60
55						1.480 .387 31 1.388 1.819 2.307	1.768 .520 69 1.739 2.260 2.840	1.446 .355 33 1.470 1.800 2.023		1.621 .480 133 1.597 2.054 2.804	55
50								1.458 .519 110 1.407 1.741 2.854		1.458 .519 110 1.407 1.741 2.854	50
45			1.279 .330 16 1.289 1.471 1.908		1.876 .529 21 1.876 2.272 2.820	1.510 .486 5 1.505 1.846 2.291	1.350 .419 58 1.289 1.850 2.279	1.354 .302 128 1.357 1.616 2.096		1.399 .398 228 1.284 1.814 2.330	45
40						1.062 .415 133 1.972 1.446 1.955		1.071 .325 34 1.043 1.426 1.577		1.064 .398 167 1.002 1.435 1.929	40
35			.820 .289 23 808 1.119 1.330			.548 .141 19 571 .674 .807		1.861 .381 16 1.800 2.130 2.666		1.018 .603 58 1.717 1.742 2.371	35
30		.336 .223 5 .290 .525 .702	.520 .156 18 519 .659 .818			.576 .222 33 612 .786 1.050				.536 .215 56 .432 .732 1.004	30
25											25
20		.354 .182 6 .377 .524 .599					.439 .198 12 .445 .646 .800			.411 .197 18 .348 .619 .777	20
15											15
10						.336 .564 15 186 .255 1.842				.336 .564 15 186 .255 1.842	10
5		.286 1								.286 1	5
0		.222 .110 3 .199 .313 .359								.222 .110 3 .199 .313 .359	0
5				.264 .040 3 .247 .297 .317						.264 .040 3 .247 .297 .317	5
10											10
15							2.979 1			2.979 1	15
20											20
25											25
30											30
35											35
40			.927 .340 54 849 1.318 1.622				1.273 1			.933 .340 55 858 1.305 1.621	40
45S											45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MAY  
FL 590

	MEAN								LAT
70N									70N
65				2.611 .350 12 2.817 2.858 3.016				2.611 .350 12 2.817 2.858 3.016	65
60					2.327 .564 35 2.254 2.912 3.406			2.327 .564 35 2.254 2.912 3.406	60
55					1.806 .421 31 1.818 2.145 2.685	2.120 .495 69 2.113 2.591 3.313	1.723 .428 33 1.720 2.061 2.708	1.948 .496 133 1.935 2.455 2.936	55
50							1.654 .537 110 1.598 1.948 2.031	1.654 .537 110 1.598 1.948 2.031	50
45		1.475 .315 16 1.418 1.810 2.027		2.145 .486 21 2.171 2.537 3.087	1.826 .533 5 1.746 2.277 2.614	1.627 .443 57 1.636 2.004 2.487	1.558 .354 127 1.494 1.889 2.420	1.630 .431 226 1.482 2.036 2.628	45
40					1.335 .487 133 1.197 1.785 2.660		1.382 .325 34 1.360 1.738 1.961	1.345 .459 167 1.261 1.773 2.628	40
35		1.079 .368 23 1.042 1.510 1.737			.862 .302 19 .797 1.186 1.445		2.047 .509 16 2.053 2.538 2.840	1.275 .625 58 1.072 1.834 2.762	35
30	.452 .315 5 .331 .669 1.006	.775 .235 18 .747 1.016 1.154			.877 .378 33 .845 1.210 1.756			.806 .354 56 .624 1.103 1.716	30
25									25
20	.470 .180 6 .514 .655 .672					.692 .262 12 .655 .810 1.263		.618 .260 18 .552 .785 1.205	20
15									15
10					.466 .597 15 .312 .446 2.053			.466 .597 15 .312 .446 2.053	10
5	.164 1							.164 1	5
0	.270 .082 3 .225 .334 .379							.270 .082 3 .225 .334 .379	0
5			.463 .075 3 .416 .520 .563					.463 .075 3 .416 .520 .563	5
10									10
15						.299 1		.299 1	15
20									20
25									25
30									30
35									35
40		1.142 .320 54 1.094 1.501 1.805				.265 1		1.126 .338 55 1.093 1.494 1.805	40
45S									45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
LONGITUDE									

JUNE  
FL 190

													MEAN			LAT						
70N																						70N
65																						65
60																						60
55																						55
50																						50
45																						45
40																						40
35																						35
30																						30
25																						25
20																						20
15																						15
10																						10
5																						5
0																						0
5																						5
10																						10
15																						15
20																						20
25																						25
30																						30
35																						35
40																						40
45S																						45S
15E	60E	105E	150E	165W	120W	75W	30W	15E														
LONGITUDE																						

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JUNE  
FL 210

	MEAN										LAT
70N											70N
65					.036 .016 12 .035 .052 .062					.036 .016 12 .035 .052 .062	65
60						.055 .018 34 .058 .069 .087				.055 .018 34 .058 .069 .087	60
55						.057 .019 26 .054 .071 .102	.061 .018 61 .061 .077 .099	.056 .014 32 .059 .067 .077		.059 .017 119 .059 .071 .101	55
50								.066 .023 108 .065 .087 .116		.066 .023 108 .065 .087 .116	50
45			.089 .024 16 .091 .114 .130		.050 .026 11 .055 .075 .091	.050 .009 2 .050 .056 .059	.061 .017 29 .064 .074 .090	.061 .017 110 .061 .076 .101		.063 .020 168 .058 .078 .112	45
40					.040 .003 4 .041 .043 .043	.055 .024 143 .053 .082 .100	.070 .016 10 .071 .088 .098	.060 .021 31 .064 .079 .095		.057 .023 188 .052 .080 .100	40
35			.075 .045 16 .070 .111 .170		.024 .008 4 .022 .030 .036	.046 .021 32 .039 .063 .092				.053 .034 52 .043 .077 .152	35
30		.052 .023 6 .049 .071 .089	.053 .025 14 .050 .078 .098			.058 .021 17 .057 .068 .108				.055 .023 37 .054 .074 .104	30
25											25
20		.047 .016 9 .048 .061 .071			.034 .012 16 .036 .044 .056		.058 .028 11 .048 .099 .103			.045 .022 36 .039 .061 .101	20
15		.034 .026 3 .024 .055 .068								.034 .026 3 .024 .055 .068	15
10		.044 .008 3 .047 .050 .051				.024 .008 15 .027 .031 .035				.028 .011 18 .028 .035 .050	10
5		.039 .023 2 .039 .055 .061								.039 .023 2 .039 .055 .061	5
0		.038 .015 5 .033 .050 .062								.038 .015 5 .033 .050 .062	0
5				.015 .004 4 .016 .019 .021						.015 .004 4 .016 .019 .021	5
10											10
15				.031 1			.021 .004 2 .021 .024 .025			.024 .006 3 .025 .029 .031	15
20											20
25											25
30											30
35			.025 1	.044 .009 2 .044 .049 .052						.037 .011 3 .035 .047 .051	35
40			.036 .007 60 .034 .043 .051				.015 .003 3 .017 .017 .017			.035 .009 63 .033 .042 .051	40
45S				.045 .010 5 .045 .052 .061		.072 1				.050 .013 6 .046 .064 .071	45S

15E 60E 105E 150E 165W 120W 75W 30W 15E

LONGITUDE

		MEAN												LAT										
70N														70N										
65						.037 .035	.012 .054	13 .055						.037 .035	.012 .054	13 .055	65							
60									.057 .060	.019 .074	34 .092			.057 .060	.019 .074	34 .092	60							
55									.061 .054	.022 .089	26 .106	.066 .066	.023 .087	61 .112	.058 .061	.016 .087	32 .091	.053 .062	.022 .083	119 .111	55			
50						.065		1						.069 .068	.024 .092	108 .120	.069 .068	.024 .092	108 .120	50				
45	.077	1			.090 .098	.024 .112	16 .129		.049 .057	.025 .064	10 .089	.056 .055	.009 .063	3 .067	.062 .061	.019 .077	29 .100	.063 .063	.020 .080	109 .111	.064 .061	.022 .085	168 .114	45
40	.076	1							.070		1	.058 .057	.026 .087	141 .114	.069 .075	.021 .088	4 .091	.065 .064	.022 .084	31 .111	.060 .056	.025 .086	178 .113	40
35					.077 .068	.048 .127	15 .176		.018		1	.047 .045	.020 .064	22 .090							.058 .051	.037 .082	38 .157	35
30			.046 .044	.016 .063	5 .068	.053 .048	.025 .073	14 .109							.061 .053	.026 .079	17 .124				.056 .039	.025 .076	36 .124	30
25																							25	
20			.049 .051	.016 .064	10 .076	.036		1	.042 .040	.016 .059	10 .064				.065 .050	.031 .104	11 .120				.052 .048	.024 .068	32 .113	20
15			.042 .042	.017 .054	2 .058																.042 .042	.017 .054	2 .058	15
10			.045 .050	.008 .051	3 .051							.024 .025	.009 .032	15 .037							.028 .027	.012 .036	18 .051	10
5			.066		1																.066		1	5
0			.042 .039	.018 .058	4 .069																.042 .039	.018 .058	4 .069	0
5						.015 .016	.003 .017	4 .017													.015 .016	.003 .017	4 .017	5
10																								10
15															.025 .025	.007 .029	2 .031				.025 .025	.007 .029	2 .031	15
20																								20
25																								25
30																								30
35					.050 .050	.005 .053	2 .055														.050 .050	.005 .053	2 .055	

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JUNE  
FL 250

	MEAN								LAT
									70N
70N									
65				.046 .024 12 .043 .065 .096				.046 .024 12 .043 .065 .096	65
60					.062 .024 34 .062 .082 .109			.062 .024 34 .062 .082 .109	60
55					.069 .032 26 .057 .101 .151	.076 .036 61 .067 .098 .167	.059 .022 31 .059 .068 .114	.070 .033 118 .063 .093 .160	55
50							.073 .027 113 .069 .100 .133	.073 .027 113 .069 .100 .133	50
45			.093 .029 16 .096 .126 .138	.045 .032 11 .047 .061 .114	.053 .005 2 .053 .056 .057	.068 .026 30 .065 .091 .121	.068 .024 110 .067 .085 .130	.069 .027 169 .066 .088 .136	45
40				.048 1	.062 .031 134 .060 .084 .144	.040 1	.063 .020 31 .063 .081 .103	.062 .029 187 .060 .083 .133	40
35	.073 .001 2 .073 .074 .074		.076 .045 14 .069 .108 .166	.017 .017 2 .017 .029 .033	.050 .020 30 .054 .071 .079			.057 .033 48 .052 .076 .156	35
30	.072 1	.049 .017 5 .048 .067 .071	.055 .029 14 .054 .075 .122		.058 .019 17 .056 .077 .094			.056 .023 37 .055 .074 .106	30
25									25
20		.054 .016 8 .053 .072 .076	.072 .012 2 .072 .080 .084	.040 .015 8 .043 .054 .058		.066 .037 11 .051 .113 .133		.056 .028 29 .052 .075 .131	20
15		.036 .011 2 .036 .043 .047						.036 .011 2 .036 .043 .047	15
10		.047 .009 3 .051 .054 .055			.027 .012 15 .029 .036 .047			.030 .013 18 .031 .040 .054	10
5		.071 1						.071 1	5
0		.040 .021 5 .034 .057 .074						.040 .021 5 .034 .057 .074	0
5				.016 .003 4 .018 .018 .018				.016 .003 4 .014 .018 .018	5
10									10
15						.025 .005 2 .025 .028 .030		.025 .005 2 .025 .028 .030	15
20									20
25									25
30									30
35			.043 1	.049 .027 5 .046 .066 .092				.048 .025 6 .045 .058 .091	35
40			.039 .009 60 .037 .046 .058			.020 .007 3 .017 .026 .029		.038 .009 63 .037 .046 .058	40
45S				.050 .011 5 .050 .060 .067	.082 1			.055 .016 6 .053 .071 .081	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
	LONGITUDE								



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JUNE  
FL 290

											MEAN			LAT														
70N																									70N			
65											.061 .051	.041 .091	12 147										.061 .051	.041 .091	12 147	65		
60																.098 .075	.093 .125	34 377					.098 .075	.093 .125	34 377	60		
55																.089 .068	.057 .137	26 235	.103 .081	.075 .152	.61 .354	.077 .066	.057 .084	38 302	.092 .071	.067 .116	123 304	55
50											.079		1			.001		1				.092 .079	.056 .120	116 240	.091 .078	.056 .120	118 240	50
45	.066 .073	.019 .082	5 084		.113 .108	.042 .139	16 212	.052 .049	.009 .059	3 063	.050 .044	.031 .078	10 110	.070 .069	.009 .078	3 081	.061 .072	.037 .098	32 185	.084 .072	.056 .105	114 275	.083 .072	.051 .107	183 253	45		
40	.104 .102	.037 .134	9 169		.066 .068	.015 .079	3 083	.073 .040	.052 .112	3 142	.090 .090	.044 .120	2 132	.075 .065	.077 .098	139 194	.061 .076	.030 .088	7 088	.071 .073	.018 .086	30 107	.075 .068	.068 .101	193 179	40		
35	.101 .082	.045 .145	5 170		.071 .067	.037 .094	21 157				.060 .049	.020 .079	7 097	.049 .047	.022 .065	25 100							.083 .053	.034 .085	58 168	35		
30	.090 .095	.011 .098	4 100	.060 .060	.020 .077	8 092	.052 .047	.020 .071	16 092							.064 .069	.022 .089	17 096						.061 .061	.023 .092	45 099	30	
25	.053 .053	.014 .062	2 065	.068 .062	.021 .085	5 102	.059 .055	.015 .074	5 080		.053 .060	.011 .061	3 061										.060 .060	.017 .073	15 098	25		
20				.052 .045	.018 .073	11 082	.068 .077	.018 .080	3 082		.038 .037	.014 .049	15 064				.065 .050	.034 .092	11 137				.051 .044	.025 .077	40 109	20		
15				.035 .026	.014 .045	3 053																	.095 .026	.014 .045	3 053	15		
10				.049 .038	.026 .075	5 088								.027 .029	.010 .036	15 041							.032 .025	.018 .040	20 081	10		
5				.047 .027	.030 .070	3 087																	.047 .027	.030 .070	3 087	5		
0				.046 .036	.024 .065	5 086	.009		1														.040 .031	.026 .059	8 085	0		
5							.019		1	.019 .019	.005 .023	4 027											.019 .019	.005 .022	5 026	5		
10							.026 .026	.006 .029	2 031														.026 .026	.006 .029	2 031	10		
15							.034 .034	.005 .037	2 039								.025 .025	.005 .026	2 027				.025 .028	.005 .034	4 038	15		
20		.033 .033	.004 .036	2 037	.039		1	.035		1													.033 .033	.004 .038	2 039	20		
25				.037 .037	.002 .038	2 039	.045		1														.039 .039	.004 .043	2 045	25		
30				.051 .051	.005 .034	2 055	.053 .052	.011 .063	4 068														.052 .047	.009 .059	8 066	30		
35				.051 .046	.018 .072	10 084	.041 .041	.001 .042	2 042														.051 .043	.011 .071	12 084	35		
40				.046 .041	.018 .055	60 092											.041 .016	.036 .068	3 089				.035 .041	.020 .055	61 094	40		
45S							.055 .055	.013 .068	5 073					.062		1								.056 .059	.012 .066	8 073	45S	
	15E	60E	105E	150E	165W	120W	75W	30W	15E																			

LONGITUDE

	MEAN	LAT
1960-1970	18.0	18.0
1971-1980	18.5	18.5
1981-1990	19.0	19.0
1991-2000	19.5	19.5
2001-2010	20.0	20.0
2011-2020	20.5	20.5
2021-2030	21.0	21.0
2031-2040	21.5	21.5
2041-2050	22.0	22.0
2051-2060	22.5	22.5
2061-2070	23.0	23.0
2071-2080	23.5	23.5
2081-2090	24.0	24.0
2091-2100	24.5	24.5

70N																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																</
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CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JUNE  
FL 330

	MEAN										LAT
70N											70N
65						.229 .167	.177 .487	13 577			65
60											60
55						.241 .107	.201 .424	5 578			55
50						.322 .434	.166 .459	5 487			50
45						.258 .232	.182 .446	43 594			45
40						.447 .454	.041 .482	5 506			40
35						.174 .107	.152 .302	69 585			35
30						.135 .100	.108 .194	55 447			30
25						.168 .106	.147 .194	161 578			25
20						.130 .096	.096 .234	40 466			20
15						.139 .083	.115 .203	138 479			15
10						.121 .087	.099 .207	239 425			10
5						.091 .088	.046 .136	12 169			5
0						.070 .059	.034 .087	13 150			0
5						.066 .061	.025 .091	8 103			5
10						.052 .055	.018 .071	6 076			10
15						.064 .068	.025 .084	7 096			15
20						.071 .071	.041 .084	49 194			20
25						.053 .055	.013 .063	6 070			25
30						.056 .050	.030 .080	36 123			30
35						.068 .071	.025 .093	19 108			35
40						.064 .054	.044 .091	42 162			40
45						.056 .054	.034 .074	25 142			45
50						.061 .049	.033 .082	11 133			50
55						.052 .050	.017 .072	7 076			55
60						.051 .051	.001 .051	2 051			60
65						.039 .033	.044 .047	5 052			65
70						.033 .033	.020 .047	2 052			70
75						.034 .033	.016 .049	15 062			75
80						.046 .034	.032 .072	4 096			80
85						.049 .034	.031 .074	5 103			85
90						.027 .027	.004 .029	2 030			90
95						.021 .023	.003 .024	3 024			95
100						.025 .025	.006 .031	14 034			100
105						.024 .024	.005 .027	2 028			105
110						.028 .027	.004 .032	4 035			110
115						.030 .028	.008 .040	10 042			115
120						.028 .028	.004 .031	9 034			120
125						.036 .030	.014 .049	11 066			125
130						.071 .050	.034 .097	3 116			130
135						.041 .041	.014 .054	15 066			135
140						.093 .093	.001 .093	2 093			140
145						.069 .058	.046 .094	16 164			145
150						.060 .059	.039 .089	9 134			150
155						.051 .049	.015 .068	16 077			155
160						.072 .052	.048 .113	60 220			160
165						.070 .060	.035 .092	5 132			165
170						.059 .059	.059 .059	1 059			170
175						.145 .030	.165 .267	3 364			175
180						.076 .051	.061 .120	63 242			180
185						.068 .055	.033 .080	6 131			185

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JUNE  
FL 350

	MEAN										LAT
70N											70N
65											65
60											60
55											55
50											50
45											45
40											40
35											35
30											30
25											25
20											20
15											15
10											10
5											5
0											0
5											5
10											10
15											15
20											20
25											25
30											30
35											35
40											40
45S											45S
15E	60E	105E	150E	165W	120W	75W	30W	15E			

LONGITUDE

MEAN	ST. DEV.	N
50%	84%	98%

JUNE  
FL 370

											MEAN	LAT
70N							.660	1	.583 .111 14 .617 .645 .666	.569 .014 5 .562 .583 .590	.583 .095 20 .594 .646 .665	70N
65						.512 .131 50 .529 .612 .766	.593 .075 23 .613 .653 .671	.505 .135 15 .557 .626 .634	.491 .172 15 .565 .637 .671	.526 .134 103 .563 .641 .758	65	
60				.491 .089 13 .531 .568 .583	.391 .180 48 .476 .552 .645	.452 .165 66 .490 .605 .671	.482 .107 23 .485 .593 .677	.218 .171 23 .176 .418 .553	.411 .180 173 .468 .574 .659	60		
55				.439 .153 45 .471 .591 .646	.399 .191 26 .442 .583 .692	.331 .159 69 .360 .514 .590	.347 .200 74 .297 .546 .808	.264 .173 57 .240 .461 .572	.346 .185 271 .361 .537 .664	55		
50				.241 .167 16 .127 .410 .569	.294 .150 33 .356 .430 .514	.190 .138 37 .154 .354 .476	.159 .137 41 .096 .338 .493	.240 .174 136 .189 .460 .597	.228 .166 263 .175 .423 .590	50		
45	.197 1		.248 .173 17 .176 .455 .599	.313 .152 38 .344 .462 .567	.207 .169 48 .150 .366 .535	.146 .109 53 .096 .259 .437	.231 .214 48 .119 .540 .704	.248 .158 117 .208 .407 .645	.230 .169 322 .122 .407 .656	45		
40	.067 .039 7 .040 .115 .119		.180 .120 8 .121 .337 .352	.132 .118 34 .099 .163 .492	.149 .146 57 .078 .282 .587	.143 .132 383 .095 .224 .563	.094 .033 3 .108 .120 .125	.189 .139 37 .119 .331 .534	.145 .133 529 .096 .298 .563	40		
35	.039 1		.101 .080 28 .073 .148 .297	.091 .079 17 .063 .120 .296	.106 .103 152 .071 .150 .522	.093 .076 75 .070 .126 .359			.101 .093 273 .071 .143 .434	35		
30		.061 .020 5 .057 .073 .094	.096 .070 25 .070 .173 .271	.100 .079 12 .070 .156 .282	.080 .061 198 .063 .116 .248	.070 .036 17 .067 .088 .154			.082 .061 257 .063 .117 .265	30		
25		.032 1	.061 .013 3 .055 .071 .078	.044 .014 9 .044 .053 .072	.064 .034 164 .057 .085 .190	.052 1			.063 .033 178 .055 .083 .184	25		
20		.057 .028 13 .045 .094 .102	.043 .017 6 .040 .061 .066	.042 .009 3 .043 .049 .052	.055 .023 45 .051 .079 .096	.040 .002 2 .040 .041 .041	.070 .033 11 .066 .093 .136		.055 .025 80 .047 .082 .106	20		
15		.050 .014 6 .053 .062 .066	.041 .007 5 .037 .049 .050		.038 .018 18 .030 .052 .081	.030 .009 3 .037 .037 .037			.040 .017 32 .031 .053 .076	15		
10		.044 .021 9 .039 .055 .090	.041 .006 4 .041 .047 .048	.022 .001 4 .022 .023 .024	.029 .008 17 .027 .037 .045	.036 .017 15 .034 .053 .066			.034 .016 49 .033 .048 .071	10		
5		.048 .036 3 .023 .075 .096		.029 .015 9 .021 .045 .057	.032 .009 12 .032 .040 .045				.032 .018 24 .023 .043 .080	5		
0		.061 .034 4 .048 .090 .113		.032 .011 13 .029 .041 .047	.035 .012 5 .035 .046 .051				.038 .021 22 .032 .047 .093	0		
5				.028 .012 16 .028 .039 .051	.036 .008 6 .037 .043 .047				.030 .012 22 .027 .042 .050	5		
10				.030 .008 8 .028 .039 .043	.035 .014 2 .035 .044 .047				.031 .009 10 .028 .042 .047	10		
15		.027 1		.034 .010 6 .030 .046 .050			.033 .001 2 .033 .033 .033		.033 .009 9 .031 .042 .049	15		
20				.028 .015 12 .029 .046 .052					.028 .015 12 .026 .046 .052	20		
25				.027 .015 11 .024 .042 .055					.027 .015 11 .024 .042 .055	25		
30		.042 .003 3 .043 .044 .045	.062 .019 5 .057 .083 .088	.076 .025 8 .085 .096 .105					.065 .024 16 .053 .093 .103	30		
35			.090 .043 15 .087 .117 .189	.099 .058 8 .094 .129 .214					.093 .049 23 .087 .125 .219	35		
40			.140 .090 61 .113 .226 .364				.334 .341 3 .097 .586 .787		.149 .122 64 .111 .229 .382	40		
45S				.113 .082 5 .064 .176 .257		.063 1			.105 .077 6 .061 .153 .255	45S		
	15E	60E	105E	150E	165W	120W	75W	30W	15E			

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JUNE  
FL 390

	MEAN															LAT
70N																70N
65																65
60																60
55																55
50																50
45																45
40																40
35																35
30																30
25																25
20																20
15																15
10																10
5																5
0																0
5																5
10																10
15																15
20																20
25																25
30																30
35																35
40																40
45S																45S
15E	60E	105E	150E	165W	120W	75W	30W	15E								

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JUNE  
FL 410

	MEAN										LAT																
70N						.519	.106	.8	.619	.145	.15	.564	.141	.23	70N												
						.497	.571	.719	.660	.722	.774	.624	.714	.768													
65						.695	.188	.12	.546	.124	.13	.429	.178	.19	65												
						.737	.878	.915	.578	.663	.688	.498	.610	.647	.502	.196	.96										
60									.584	.176	.55	.482	.160	.57	.496	.180	.197										
						.643	.095	.8	.578	.703	.983	.490	.663	.724	.436	.623	.689										
55									.479	.161	.56	.488	.196	.62	.472	.118	.68										
						.478	.193	.19	.530	.625	.695	.486	.654	.878	.483	.587	.715										
50									.365	.125	.4	.455	.146	.44	.411	.170	.105										
						.525	.116	.21	.403	.455	.490	.511	.140	.5	.427	.559	.774										
45	.533	.071	.3		.358	.211	.20	.332	.213	.13	.298	.244	.33	.382	.166	.47	.325	.245	.31	.385	.150	.110	.353	.192	.257	45	
	.507	.591	.626		.321	.583	.734	.267	.547	.635	.211	.462	.895	.392	.574	.628	.236	.628	.936	.409	.540	.664	.354	.550	.742		
40	.645	.039	.5		.182	.198	.13	.123	.139	.16	.296	.172	.28	.223	.171	.169				.280	.142	.30	.238	.180	.261	40	
	.670	.677	.686		.061	.342	.623	.064	.184	.471	.282	.500	.590	.167	.370	.651				.283	.424	.521	.172	.430	.667		
35	.160	.110	.3		.178	.169	.29	.067	.012	.2	.100	.054	.4	.208	.155	.22							.179	.157	.60	35	
	.104	.246	.305		.084	.402	.558	.067	.074	.078	.105	.154	.157	.130	.389	.535							.070	.375	.573		
30	.062	.004	.2	.068	.026	.5		.132	.132	.21	.086	.040	.10	.089	.056	.17							.102	.093	.55	30	
	.062	.064	.065	.067	.090	.107		.072	.178	.478	.092	.120	.142	.077	.112	.235							.072	.124	.463		
25					.088	.022	.7				.092	.116	.13										.091	.095	.20	25	
					.096	.100	.117				.040	.117	.399										.053	.112	.356		
20				.081	.049	.9		.085	.015	.4	.060	.042	.11				.090	.058	.11				.078	.049	.35	20	
				.073	.138	.149		.087	.097	.102	.045	.089	.152				.073	.134	.212				.072	.126	.185		
15				.042	.032	.5		.086		.1	.035	.005	.3										.045	.028	.9	15	
				.023	.071	.095					.033	.039	.042										.033	.077	.097		
10				.076	.026	.3					.026	.006	.2	.040	.017	.15							.044	.023	.20	10	
				.058	.095	.111					.026	.029	.031	.045	.052	.074							.046	.058	.100		
5				.113		.1					.045		.1										.079	.034	.2	5	
																							.079	.102	.112		
0				.067	.034	.4																	.067	.034	.4	0	
				.058	.096	.119																	.056	.096	.119		
5								.028	.019	.4													.028	.019	.4	5	
								.023	.042	.057													.023	.042	.057		
10																										10	
15																	.037	.002	.2				.037	.002	.2	15	
																	.037	.038	.039				.037	.038	.039		
20								.054		.1													.054		.1	20	
25								.071	.010	.5													.071	.010	.5	25	
								.071	.077	.088													.071	.077	.088		
30								.134	.053	.5													.134	.053	.5	30	
								.111	.158	.229													.111	.158	.229		
35								.281	.119	.17													.281	.119	.17	35	
								.303	.395	.454													.303	.395	.454		
40							.213	.113	.60								.393	.304	.3				.222	.134	.63	40	
							.179	.322	.512								.194	.621	.797				.181	.322	.515		
45S								.211	.081	.5							.070		.1				.188	.091	.6	45S	
								.159	.282	.349													.157	.262	.347		
	15E	60E	105E	150E	165W	120W	75W	30W	15E																		
	LONGITUDE																										

JUNE  
FL 430

											MEAN			LAT	
70N															70N
65						.764 .221 .12							.764 .221 .12		65
						.752 .977 1.033							.752 .977 1.033		
60								.639 .173 .47		.643 .004 .2			.639 .170 .49		60
								.643 .791 1.085		.643 .646 .647			.643 .788 1.083		
55					.414 .118 .5								.530 .185 .132		55
					.472 .504 .507			.476 .172 .35		.558 .208 .61	.556 .132 .31		.516 .698 .954		
								.543 .625 .704		.557 .745 1.019	.574 .702 .777				
50					.315 .136 .7	.403 .180 .3	.314 .179 .4				.449 .161 .105	.436 .166 .119			50
					.359 .451 .458	.408 .552 .612	.254 .441 .592				.452 .610 .783	.447 .610 .766			
45			.441 .189 .20		.315 .186 .10	.565 .321 .10	.335 .151 .7	.386 .237 .32		.315 .656 .819	.428 .139 .109	.420 .187 .188			45
			.486 .605 .702		.313 .560 .571	.689 .887 .943	.262 .426 .619				.443 .552 .720	.393 .565 .815			
40			.283 .208 .10		.107 .006 .3	.212 .127 .2	.250 .167 .138	.133		1	.350 .147 .30	.265 .170 .184			40
			.211 .510 .565		.105 .112 .115	.212 .298 .334	.221 .363 .722				.394 .491 .570	.214 .440 .676			
35			.134 .130 .20		.094	.063 .091 .2	.183 .128 .21					.153 .129 .44			35
			.090 .173 .496			.063 .34 .064	.146 .298 .491					.084 .255 .543			
30		.073 .031 .5		.105 .086 .14		.122 .031 .5	.139 .107 .18					.118 .090 .42			30
		.074 .100 .117		.085 .132 .331		.113 .154 .165	.101 .241 .402					.063 .159 .410			
25						.044	.1					.044			25
20		.101 .053 .8		.096	.1	.063 .049 .4			.110 .079 .11			.098 .067 .24			20
		.096 .157 .178				.055 .111 .127			.082 .188 .256			.055 .149 .255			
15		.076 .021 .3		.084 .001 .2								.079 .017 .5			15
		.074 .094 .102		.084 .085 .085								.083 .091 .102			
10		.097 .017 .3					.044 .019 .15					.053 .027 .18			10
		.086 .109 .119					.039 .064 .076					.051 .081 .108			
5		.120	.1									.120	.1		5
0		.079 .027 .4										.079 .027 .4			0
		.070 .101 .121										.070 .101 .121			
5				.028 .018 .4								.028 .018 .4			5
				.021 .041 .057								.021 .041 .057			
10															10
15									.038 .005 .2			.038 .005 .2			15
									.038 .041 .043			.038 .041 .043			
20															20
25				.096	.1							.096	.1		25
30				.100 .007 .2								.100 .007 .2			30
				.100 .105 .107								.100 .105 .107			
35				.120 .012 .2								.120 .012 .2			35
				.120 .128 .132								.120 .128 .132			
40			.250 .117 .60						.433 .167 .3			.258 .126 .63			40
			.230 .332 .519						.323 .559 .656			.234 .354 .535			
45S				.245 .089 .5			.075	.1				.217 .103 .6			45S
				.219 .323 .389								.197 .304 .387			
	15E	60E	105E	150E	165W	120W	75W	30W	15E						
	LONGITUDE														

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JUNE  
FL 450

										MEAN			LAT
70N													70N
65										.816	.300	12	65
										.763	1.153	1.343	
60										.660	.222	.34	60
										.660	.795	1.236	
55										.520	.162	.26	55
										.532	.651	.824	
50										.611	.221	.60	50
										.606	.810	1.122	
45										.574	.135	.31	45
										.612	.678	.832	
40										.500	.175	.105	40
										.493	.634	.892	
35										.581	.193	.117	35
										.600	.754	1.057	
30										.500	.175	.105	30
										.493	.634	.892	
25										.581	.193	.117	25
										.600	.754	1.057	
20										.500	.175	.105	20
										.493	.634	.892	
15										.581	.193	.117	15
										.600	.754	1.057	
10										.500	.175	.105	10
										.493	.634	.892	
5										.581	.193	.117	5
										.600	.754	1.057	
0										.500	.175	.105	0
										.493	.634	.892	
5S										.581	.193	.117	5S
										.600	.754	1.057	
10S										.500	.175	.105	10S
										.493	.634	.892	
15S										.581	.193	.117	15S
										.600	.754	1.057	
20S										.500	.175	.105	20S
										.493	.634	.892	
25S										.581	.193	.117	25S
										.600	.754	1.057	
30S										.500	.175	.105	30S
										.493	.634	.892	
35S										.581	.193	.117	35S
										.600	.754	1.057	
40S										.500	.175	.105	40S
										.493	.634	.892	
45S										.581	.193	.117	45S
										.600	.754	1.057	
LONGITUDE													

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JUNE  
FL 470

											MEAN			LAT								
70N															70N							
65						.911	.171	12						.911	.171	12	65					
						.888	1.107	1.250						.888	1.107	1.250						
60									.738	.221	34			.738	.221	34	60					
									.734	.833	1.305			.734	.833	1.305						
55									.560	.185	26		.695	.244	60		.651	.220	117	55		
									.592	.693	.849		.663	.910	1.278		.647	.858	1.229			
50														.553	.188	105		.553	.188	105	50	
														.564	.732	.862		.564	.732	.862		
45				.571	.232	16		.588	.316	10	.533	1	.481	.264	29	.530	.139	109	.529	.193	165	45
				.560	.840	.969		.562	.858	1.150			.471	.747	1.014	.544	.652	.768	.541	.673	.992	
40											.347	.183	128			.449	.174	30	.367	.186	158	40
											.324	.542	.804			.463	.605	.814	.309	.565	.820	
35				.191	.110	14					.268	.225	16						.232	.185	30	35
				.175	.322	.370					.166	.493	.783						.130	.353	.728	
30		.090	.041	5	.116	.047	14				.182	.167	17						.144	.125	36	30
		.105	.127	.139	.098	.162	.218				.130	.217	.646						.092	.203	.467	
25																						25
20		.130	.068	8				.071	.035	4				.170	.129	11			.139	.105	23	20
		.126	.200	.215				.077	.103	.111				.131	.305	.425			.112	.218	.394	
15		.091	.021	2															.091	.021	2	15
		.091	.105	.111															.091	.105	.111	
10		.111	.028	3							.061	.027	15						.070	.033	18	10
		.125	.133	.137							.056	.083	.115						.063	.095	.134	
5		.135		1															.135		1	5
0		.087	.031	4															.087	.031	4	0
		.083	.116	.127															.083	.116	.127	
5					.037	.021	4												.037	.021	4	5
					.026	.050	.070												.026	.050	.070	
10																						10
15														.060	.003	2			.060	.003	2	15
														.060	.061	.062			.060	.061	.062	
20																						20
25																						25
30																						30
35																						35
40				.355	.204	60								.448	.382	3			.359	.216	63	40
				.302	.583	.908								.198	.735	.956			.300	.589	.946	
45S							.385	.068	5		.135	1							.344	.112	6	45S
							.360	.432	.505										.351	.412	.502	
	15E	60E	105E	150E	165W	120W	75W	30W	15E													
LONGITUDE																						



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JUNE  
FL 490

	MEAN								LAT
70N									70N
65				1.020 .217 .12				1.020 .217 .12	65
60				.994 1.233 1.401				.994 1.233 1.401	60
55					.901 .305 .34			.901 .305 .34	55
50					.884 1.140 1.693			.884 1.140 1.693	50
45					.636 .259 .26	.772 .269 .60	.693 .181 .31	.721 .253 .117	45
40					.693 .889 1.110	.762 1.025 1.357	.677 .843 1.067	.719 .970 1.317	40
35							.619 .180 .105	.619 .180 .105	35
30							.613 .816 .991	.613 .816 .991	30
25									25
20									20
15									15
10									10
5									5
0									0
5									5
10									10
15									15
20									20
25									25
30									30
35									35
40									40
45S									45S
15E	60E	105E	150E	165W	120W	75W	30W	15E	
LONGITUDE									



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JUNE  
FL 530

	MEAN										LAT
70N											70N
65					1.469 .196 .12 1.459 1.681 1.717					1.469 .196 .12 1.459 1.681 1.717	65
60						1.267 .362 .34 1.183 1.646 2.123				1.267 .362 .34 1.183 1.646 2.123	60
55						.875 .301 .26 913 1.097 1.409	1.075 .257 .60 1.066 1.358 1.554	.961 .256 .31 855 1.110 1.568		1.001 .280 .117 886 1.280 1.551	55
50								.884 .248 .105 870 1.058 1.519		.884 .248 .105 870 1.058 1.519	50
45		.751 .307 .16 .781 1.154 1.210			1.228 .387 .10 1.287 1.546 1.765	.527 .1	.805 .277 .29 793 1.093 1.261	.781 .237 .109 805 .967 1.368		.808 .284 .165 808 1.056 1.466	45
40						.585 .233 .127 563 .841 1.059		.596 .237 .30 486 .841 1.104		.587 .234 .157 561 .843 1.086	40
35		.412 .260 .14 .424 .691 .863				.403 .167 .16 344 .526 .810				.407 .216 .30 303 .576 .888	35
30	.123 .060 .5 .169 .173 .178	.209 .089 .14 .183 .243 .426				.440 .289 .17 316 .715 1.104				.308 .245 .36 173 .488 .967	30
25											25
20	.208 .103 .8 .218 .328 .347				.224 .129 .4 .173 .328 .425		.337 .152 .11 .332 .458 .617			.273 .147 .23 258 .410 .573	20
15	.353 .223 .2 .353 .505 .567									.353 .223 .2 353 .505 .567	15
10	.217 .025 .3 .214 .238 .249					.155 .051 .15 157 .210 .247				.165 .053 .18 165 .223 .251	10
5	.159 .1									.159 .1	5
0	.115 .036 .4 .119 .150 .151									.115 .036 .4 119 .150 .151	0
5			.113 .046 .4 .103 .149 .180							.113 .046 .4 103 .149 .180	5
10											10
15							.153 .034 .2 153 .176 .186			.153 .034 .2 153 .176 .186	15
20											20
25											25
30											30
35											35
40		.656 .282 .60 .620 .941 1.228					.827 .422 .3 812 1.179 1.330			.664 .293 .63 621 .953 1.271	40
45S			.697 .208 .4 660 .898 .972			.432 .1				.644 .214 .5 514 .870 .969	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JUNE  
FL 550

										MEAN			LAT	
70N														70N
65						1.743	.179	.12						65
						1.748	1.934	1.964						
60									1.511	.354	.34			60
									1.463	1.872	2.282			
55									1.065	.309	.26			55
									1.052	1.418	1.499			
50												1.334	.312	.59
												1.299	1.607	2.020
45												1.167	.246	.31
												1.194	1.399	1.632
40														
35												1.020	.289	.105
30												1.010	1.307	1.777
25														
20														
15														
10														
5														
0														
5														
10														
15														
20														
25														
30														
35														
40														
45S														

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JUNE  
FL 570

	MEAN								LAT
70N									70N
65				2.049 .220 .12				2.049 .220 .12	65
60				2.053 2.288 2.337				2.053 2.288 2.337	60
55					1.741 .365 .34			1.741 .365 .34	55
50					1.640 2.117 2.451			1.640 2.117 2.451	50
45					1.299 .279 .26	1.641 .343 .58	1.467 .367 .31	1.517 .364 .115	45
40					1.310 1.618 1.739	1.594 1.897 2.465	1.499 1.849 2.043	1.513 1.853 2.222	40
35							1.211 .334 .105	1.211 .334 .105	35
30							1.196 1.541 1.821	1.196 1.541 1.821	30
25									25
20									20
15									15
10									10
5									5
0									0
5									5
10									10
15									15
20									20
25									25
30									30
35									35
40									40
45S									45S
15E	60E	105E	150E	165W	120W	75W	30W	15E	
LONGITUDE									

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JUNE  
FL 590

MEAN											LAT
70N											70N
65					2 297 .251 .12 2.358 2.547 2.617					2 297 .251 .12 2.358 2.547 2.617	65
60						2.136 .305 .34 2.079 2.601 2.680				2.136 .305 .34 2.079 2.601 2.680	60
55						1.561 .249 .26 1.537 1.836 1.926	1.918 .330 .58 1.861 2.165 2.612	1.788 .588 .31 1.565 2.553 2.822	1.797 .426 .115 1.751 2.165 2.753		55
50								1.480 .322 .105 1.474 1.765 2.207	1.480 .322 .105 1.474 1.765 2.207		50
45			1.375 .317 .16 1.348 1.701 1.908		1.742 .310 .10 1.753 1.961 2.237	1.396 .1 1.520 .339 .29 1.403 1.917 2.318		1.389 .253 .109 1.395 1.610 1.902	1.432 .295 .165 1.406 1.707 2.003		45
40						1.269 .285 .127 1.265 1.516 1.918		1.117 .319 .30 1.030 1.408 1.768	1.240 .298 .157 1.223 1.515 1.911		40
35			.928 .404 .14 .843 1.218 1.747			1.107 .210 .16 1.133 1.327 1.403			1.023 .328 .30 .953 1.326 1.606		35
30		.444 .237 .5 .520 .647 .745	.734 .234 .14 .797 .952 1.116			1.114 .313 .17 1.059 1.387 1.606			.873 .368 .36 .688 1.170 1.609		30
25											25
20		.560 .145 .8 .572 .661 .794			.696 .187 .4 .698 .839 .944		700 .152 .11 728 .886 .909		.651 .170 .23 .661 .849 .938		20
15		1.261 .862 .2 1.261 1.847 2.089							1.261 .862 .2 1.261 1.847 2.089		15
10		.602 .152 .3 .703 .713 .716				.466 .236 .15 .438 .792 .953			.489 .230 .18 .440 .718 .946		10
5		.446 .1 1							.446 .1 1		5
0		.302 .067 .4 .268 .349 .408							.302 .067 .4 .268 .349 .408		0
5				.502 .164 .4 .547 .650 .659					.502 .164 .4 .547 .650 .659		5
10											10
15							.613 .040 .2 .613 .640 .651		.613 .040 .2 .613 .640 .651		15
20											20
25											25
30											30
35											35
40			1.297 .401 .60 1.269 1.676 2.166				1.625 .177 .3 1.641 1.772 1.825		1.312 .400 .63 1.325 1.685 2.153		40
45S				1.328 .169 .4 1.322 1.496 1.524		1.446 .1			1.351 .159 .5 1.446 1.486 1.523		45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JULY  
FL 190

												MEAN			LAT							
70N																70N						
65									.052 .051	.016 .072	21 .080					.052 .051	.016 .072	21 .080	65			
60										.050 .050	.016 .066	38 .078					.050 .050	.016 .066	38 .078	60		
55										.057 .057	.021 .079	30 .091		.061 .061	.020 .080	67 .104		.055 .057	.015 .065	25 .087	55	
50										.051 .040	.017 .064	3 .075						.065 .062	.021 .081	124 .115	50	
45											.068 .072	.022 .087	20 .102						.048 .049	.011 .056	13 .066	45
40																		.031 .027	.010 .044	8 .045	40	
35																		.057 .057	.017 .073	92 .088	35	
30																		.046 .040	.016 .054	21 .083	30	
25																						25
20																						20
15																						15
10																						10
5																						5
0																						0
5S																						5S
10S																						10S
15S																						15S
20S																						20S
25S																						25S
30S																						30S
35S																						35S
40S																						40S
45S																						45S
15E	60E	105E	150E	165W	120W	75W	30W	15E														
LONGITUDE																						

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JULY  
FL 210

		MEAN										LAT
70N												70N
65						.055 .018 .21 .054 .076 .084					.055 .018 .21 .054 .076 .084	65
60							.054 .019 .38 .057 .071 .083				.054 .019 .38 .057 .071 .083	60
55							.062 .029 .30 .059 .078 .130	.061 .019 .67 .062 .077 .099	.057 .014 .25 .059 .069 .087		.060 .021 .122 .059 .078 .105	55
50						.053 .017 .3 .049 .071 .081			.068 .024 .134 .064 .090 .122		.068 .023 .138 .064 .090 .121	50
45			.075 .023 .20 .081 .091 .110			.046 .014 .13 .047 .055 .074	.041 .015 .8 .043 .054 .064	.061 .019 .36 .064 .079 .089	.069 .061 .117 .063 .073 .098		.065 .050 .194 .062 .079 .100	45
40	.039	1				.107 .017 .1 .061 .021 .102 .060 .082 .097		.053 .025 .9 .056 .068 .093	.074 .020 .31 .076 .090 .114		.063 .022 .144 .058 .085 .108	40
35			.054 .014 .6 .059 .063 .074			.057 .028 .3 .046 .079 .093	.052 .026 .27 .045 .062 .110				.053 .024 .36 .047 .079 .105	35
30		.036 .020 .7 .023 .059 .068	.056 .024 .16 .052 .077 .107				.058 .020 .23 .060 .072 .087				.054 .022 .46 .040 .073 .090	30
25	.069	1	.050 .017 .1								.060 .010 .2 .060 .066 .069	25
20		.040 .010 .12 .039 .051 .055			.035 .015 .4 .029 .046 .058			.058 .018 .14 .062 .075 .081			.048 .018 .30 .039 .067 .080	20
15												15
10		.065 .009 .4 .063 .072 .078				.051 .103 .68 .037 .055 .068					.052 .100 .72 .037 .056 .075	10
5		.027 .008 .3 .022 .033 .037									.027 .008 .3 .022 .033 .037	5
0		.028 .007 .7 .028 .037 .037									.028 .007 .7 .028 .037 .037	0
5				.012 .003 .2 .012 .013 .014							.012 .003 .2 .012 .013 .014	5
10												10
15								.007 .017 .1			.007 .017 .1	15
20				.026 .017 .1							.026 .017 .1	20
25												25
30			.011 .017 .1								.011 .017 .1	30
35				.033 .017 .5 .041 .048 .049							.033 .017 .5 .041 .048 .049	35
40			.037 .008 .59 .037 .045 .056					.026 .004 .3 .024 .029 .032			.037 .008 .62 .036 .045 .056	40
45S				.044 .005 .2 .044 .047 .049							.044 .005 .2 .044 .047 .049	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E			



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JULY  
FL 230

	MEAN										LAT
70N											70N
65					.059 .027 .21 .055 .077 .127					.059 .027 .21 .055 .077 .127	65
60						.057 .022 .38 .058 .077 .103				.057 .022 .38 .058 .077 .103	60
55						.062 .026 .30 .059 .080 .125	.065 .019 .67 .064 .081 .103	.059 .018 .25 .061 .072 .098		.083 .021 .122 .081 .079 .113	55
50						.059 .015 .3 .051 .071 .079		.073 .027 .135 .068 .100 .130		.072 .027 .138 .068 .099 .130	50
45			.077 .023 .20 .081 .101 .114		.046 .015 .13 .047 .059 .075	.039 .018 .9 .032 .057 .072	.064 .019 .37 .067 .080 .100	.069 .043 .117 .067 .080 .106		.066 .036 .196 .062 .081 .108	45
40	.063 1				.051 1	.062 .024 .98 .064 .084 .101	.056 .028 .6 .062 .080 .092	.076 .022 .31 .079 .096 .119		.065 .024 .137 .066 .088 .116	40
35			.061 .017 .6 .065 .078 .079		.033 .009 .2 .033 .039 .042	.048 .016 .22 .047 .063 .082				.049 .017 .30 .047 .067 .084	35
30		.038 .022 .7 .026 .060 .070	.050 .022 .16 .056 .080 .107			.063 .022 .23 .063 .085 .096				.058 .024 .46 .043 .080 .099	30
25											25
20		.041 .011 .13 .037 .052 .059			.057 .020 .4 .060 .071 .080		.055 .018 .14 .061 .072 .076			.049 .017 .31 .052 .068 .078	20
15			.026 .012 .2 .026 .033 .037							.026 .012 .2 .026 .033 .037	15
10		.068 .011 .4 .067 .078 .083				.043 .034 .68 .038 .053 .071				.044 .033 .72 .039 .055 .079	10
5		.027 .007 .3 .025 .033 .037								.027 .007 .3 .025 .033 .037	5
0		.030 .010 .8 .030 .035 .049								.030 .010 .8 .029 .035 .049	0
5				.012 .001 .2 .012 .013 .013						.012 .001 .2 .012 .013 .013	5
10											10
15							.014 1			.014 1	15
20											20
25											25
30			.051 1							.051 1	30
35				.072 .023 .4 .071 .092 .103						.072 .023 .4 .071 .092 .103	35
40			.039 .010 .58 .037 .049 .066				.030 .004 .3 .030 .033 .035			.039 .010 .61 .036 .049 .065	40
45S				.046 .006 .2 .046 .049 .051						.046 .006 .2 .046 .049 .051	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

**CODE:**

MEAN	ST. DEV.	N
50%	84%	98%

JULY  
FL 250

		MEAN										LAT
70N												70N
65						.064 .024 21 .063 .087 .119					.064 .024 21 .063 .087 .119	65
60							.058 .022 38 .059 .081 .098				.058 .022 38 .059 .081 .098	60
55							.067 .030 30 .062 .092 .145	.067 .021 67 .065 .084 .112	.062 .021 25 .064 .076 .110		.066 .024 122 .062 .084 .124	55
50							.060 .013 3 .053 .070 .077		.077 .030 125 .071 .107 .159		.077 .030 128 .071 .106 .158	50
45	.087 1		.079 .025 20 .082 .099 .124			.053 .017 13 .055 .064 .085	.065 .024 9 .067 .087 .102	.071 .020 34 .070 .087 .124	.070 .026 119 .071 .084 .112		.070 .025 196 .066 .087 .122	45
40						.047 .016 3 .059 .059 .059	.066 .025 99 .069 .090 .106	.076 .016 4 .069 .087 .101	.079 .023 31 .077 .105 .124		.069 .025 137 .069 .092 .118	40
35			.063 .014 8 .063 .077 .082				.047 .014 21 .052 .058 .070				.051 .015 27 .052 .065 .079	35
30		.039 .022 7 .029 .062 .066	.061 .021 16 .060 .079 .099				.064 .023 23 .057 .087 .096				.059 .023 46 .044 .084 .097	30
25			.042 1								.042 1	25
20		.042 .013 13 .040 .058 .064				.049 .030 5 .032 .071 .102		.055 .021 14 .060 .075 .088			.049 .021 32 .040 .065 .097	20
15		.013 1									.013 1	15
10		.072 .013 4 .071 .084 .089					.040 .014 68 .037 .054 .070				.042 .016 72 .038 .057 .077	10
5		.024 .008 3 .019 .030 .034									.024 .008 3 .019 .030 .034	5
0		.032 .009 8 .034 .040 .043									.032 .009 8 .034 .040 .043	0
5				.012 0.000 2 .012 .012 .012							.012 0.000 2 .012 .012 .012	5
10												10
15								.020 1			.020 1	15
20				.031 1							.031 1	20
25												25
30												30
35				.062 .016 2 .062 .072 .076							.062 .016 2 .062 .072 .076	35
40			.042 .013 58 .040 .053 .071					.033 .005 3 .036 .037 .037			.042 .013 61 .039 .053 .071	40
45S				.046 .006 2 .046 .050 .052							.046 .006 2 .046 .050 .052	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E			

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JULY  
FL 270

													MEAN													
70N																					70N					
65									.073 .060 .038 .108 .21 .162												.073 .060 .038 .108 .21 .162	65				
60									.064 .028 .38 .064 .087 .122												.064 .028 .38 .062 .087 .122	60				
55									.067 .032 .30 .062 .086 .148				.073 .027 .67 .088 .095 .150				.071 .031 .26 .067 .080 .157				.071 .029 .123 .067 .091 .163	55				
50									.061 .010 .3 .056 .069 .074								.078 .030 .130 .072 .104 .149				.078 .030 .133 .072 .104 .149	50				
45					.083 .027 .20 .086 .102 .135				.055 .020 .13 .059 .074 .087				.060 .021 .10 .055 .083 .099				.079 .031 .35 .076 .104 .163				.073 .025 .117 .070 .091 .124				.073 .027 .195 .069 .092 .138	45
40	.070 1												.068 .027 .96 .070 .098 .123				.076 1				.082 .025 .31 .077 .111 .129				.071 .027 .129 .070 .099 .127	40
35	.077 .014 .4 .073 .090 .098				.073 .018 .5 .081 .088 .091				.078 .033 .3 .057 .103 .121				.052 .017 .20 .053 .075 .079								.061 .022 .32 .056 .081 .109				35	
30					.040 .020 .7 .032 .063 .064				.061 .020 .16 .064 .074 .098				.065 .023 .23 .064 .088 .100								.060 .023 .46 .045 .064 .102				30	
25	.077 1																				.077 1				25	
20					.043 .014 .17 .040 .056 .072				.030 1				.051 .012 .2 .051 .059 .063				.055 .019 .14 .063 .071 .077				.048 .017 .34 .031 .067 .077				20	
15					.023 .002 .4 .023 .024 .024																.023 .002 .4 .022 .024 .024				15	
10					.076 .014 .4 .076 .089 .094				.018 1				.043 .015 .67 .042 .056 .074								.044 .017 .72 .041 .059 .090				10	
5					.022 .010 .3 .015 .029 .035																.022 .010 .3 .015 .029 .035				5	
0					.035 .014 .7 .034 .054 .056				.029 1												.034 .013 .8 .030 .052 .056				0	
5									.013 .002 .2 .013 .014 .014												.013 .002 .2 .013 .014 .014				5	
10																									10	
15																	.026 1				.026 1				15	
20																									20	
25																									25	
30					.054 .003 .2 .054 .055 .056																.054 .003 .2 .054 .055 .056				30	
35					.062 1				.065 .017 .2 .065 .077 .081												.064 .014 .3 .062 .076 .081				35	
40					.046 .018 .58 .041 .059 .099												.049 .012 .3 .042 .058 .065				.046 .018 .61 .041 .060 .099				40	
45S									.050 .009 .2 .050 .055 .058												.050 .009 .2 .050 .055 .058				45S	
15E 60E 105E 150E 165W 120W 75W 30W 15E																										
LONGITUDE																										

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JULY  
FL 290

	MEAN										LAT
70N											70N
65					.096 .055 22 .085 .138 .230		.089 .018 4 .084 .104 .117	.075 .011 2 .075 .082 .085	.093 .049 28 .075 .131 .219		65
60						.071 .036 38 .062 .093 .161	.130 .013 2 .130 .138 .142	.069 .005 2 .069 .072 .073	.074 .037 42 .062 .093 .156		60
55						.075 .047 30 .066 .093 .217	.082 .050 67 .072 .102 .281	.079 .060 27 .070 .084 .247	.080 .051 124 .070 .096 .278		55
50						.062 .008 3 .058 .069 .073		.080 .032 131 .074 .107 .164	.080 .031 134 .074 .106 .164		50
45	.085 .030 10 .087 .105 .140		.089 .034 20 .094 .110 .153		.076 .041 14 .074 .108 .163	.058 .020 10 .064 .079 .085	.085 .037 35 .080 .109 .189	.077 .035 121 .071 .095 .174	.079 .036 210 .069 .105 .179		45
40	.071 .022 9 .065 .087 .117				.078 .031 3 .094 .102 .106	.079 .071 105 .072 .100 .147	.086 .042 6 .103 .114 .126	.088 .028 31 .078 .129 .148	.081 .061 154 .071 .103 .147		40
35	.068 .045 14 .054 .072 .189		.073 .019 5 .081 .091 .091		.055 .020 6 .052 .077 .082	.060 .026 25 .055 .076 .122			.063 .032 30 .040 .083 .135		35
30	.067 .001 2 .067 .068 .068	.041 .018 7 .035 .059 .063	.058 .019 16 .060 .074 .085			.071 .028 23 .069 .107 .120			.062 .026 48 .048 .084 .119		30
25	.057 .022 4 .053 .075 .089	.032 1	.057 .007 2 .057 .061 .063		.036 .015 5 .030 .054 .055				.046 .019 12 .038 .058 .085		25
20		.040 .017 20 .039 .051 .076	.044 1		.041 .014 10 .043 .054 .063		.059 .022 14 .066 .074 .092		.046 .020 45 .044 .069 .092		20
15		.020 .003 3 .020 .023 .024	.038 .006 5 .041 .043 .044	.027 1		.019 1			.030 .010 10 .027 .042 .044		15
10		.045 .028 12 .029 .075 .098	.026 .012 4 .026 .038 .040			.047 .019 67 .045 .059 .103			.046 .021 83 .043 .060 .105		10
5		.022 .007 7 .019 .025 .036	.013 .002 2 .013 .014 .014						.020 .007 9 .019 .023 .036		5
0		.040 .012 8 .040 .054 .057	.012 .003 4 .012 .015 .017						.030 .017 12 .027 .050 .057		0
5			.015 .003 6 .015 .018 .019	.013 .002 2 .013 .014 .015					.015 .003 8 .015 .018 .019		5
10			.018 .004 3 .016 .021 .023						.018 .004 3 .016 .021 .023		10
15			.029 .006 3 .025 .033 .037	.019 1			.033 1		.028 .006 5 .026 .034 .037		15
20											20
25			.055 .008 5 .059 .061 .064						.055 .008 5 .058 .061 .064		25
30			.042 .013 8 .049 .052 .056						.042 .013 8 .049 .052 .056		30
35			.045 .009 2 .045 .051 .054	.093 1					.051 .024 3 .054 .081 .091		35
40			.056 .033 58 .045 .085 .133				.075 .052 3 .042 .114 .144		.057 .035 61 .045 .087 .146		40
45S				.058 .016 2 .058 .069 .073					.058 .016 2 .058 .069 .073		45S

15E 60E 105E 150E 165W 120W 75W 30W 15E

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JULY  
FL 310

	MEAN										LAT
70N											70N
65					.131 .103 .21 .095 .196 .416			.088 .008 .2 .088 .092 .094	.088 .016 .5 .095 .102 .105	.120 .092 .28 .089 .145 .397	65
60							.087 .055 .38 .079 .126 .230	.109 .016 .4 .107 .124 .128	.100 .020 .8 .099 .114 .134	.091 .049 .50 .070 .126 .210	60
55							.087 .056 .32 .070 .108 .247	.102 .073 .69 .084 .132 .371	.114 .088 .44 .085 .139 .367	.102 .075 .145 .081 .129 .364	55
50					.078 .026 .4 .090 .098 .098		.073 .024 .5 .067 .089 .114	.126 .068 .6 .117 .192 .224	.097 .052 .140 .090 .136 .213	.097 .052 .155 .087 .136 .213	50
45	.193 .106 .2 .193 .264 .294		.094 .037 .20 .095 .118 .175		.095 .070 .16 .074 .137 .267		.083 .035 .28 .078 .109 .169	.088 .059 .43 .071 .088 .236	.089 .050 .118 .081 .113 .245	.090 .053 .227 .080 .118 .281	45
40	.093 .040 .4 .083 .128 .152				.099 .010 .2 .099 .105 .108		.075 .035 .130 .074 .106 .145	.081 .048 .7 .080 .101 .162	.093 .030 .32 .084 .128 .153	.079 .035 .175 .075 .108 .155	40
35	.055 .014 .16 .051 .072 .076		.058 .024 .12 .054 .087 .092		.067 .032 .18 .063 .106 .124		.060 .024 .21 .052 .074 .120			.080 .025 .67 .054 .077 .124	35
30	.056 .010 .10 .057 .065 .068	.048 .018 .16 .048 .059 .090	.056 .019 .16 .057 .070 .096		.051 .023 .5 .047 .072 .086		.071 .026 .23 .069 .103 .114			.059 .023 .70 .053 .080 .110	30
25	.055 .014 .6 .052 .064 .079	.036 .010 .9 .035 .044 .053		.058 .004 .2 .058 .061 .062	.039 .020 .11 .034 .046 .064					.043 .017 .28 .034 .058 .087	25
20		.043 .017 .22 .037 .059 .080	.013 .1 .013 .034 .042	.058 .019 .9 .057 .074 .088	.038 .012 .25 .038 .051 .062			.058 .023 .14 .058 .073 .105		.046 .019 .71 .042 .066 .089	20
15			.023 .013 .4 .019 .034 .042		.017 .001 .2 .017 .018 .018	.053 .1				.025 .015 .7 .018 .043 .052	15
10		.074 .027 .5 .074 .099 .106	.009 .1		.021 .1	.048 .017 .67 .046 .064 .084				.048 .020 .74 .046 .066 .089	10
5		.029 .009 .3 .028 .037 .040								.029 .009 .3 .028 .037 .040	5
0		.043 .012 .8 .043 .055 .057						.030 .003 .2 .030 .031 .032		.040 .012 .10 .040 .055 .057	0
5		.020 .1	.028 .006 .2 .028 .032 .034	.012 .003 .2 .012 .014 .015				.032 .1		.022 .009 .6 .019 .032 .034	5
10			.020 .003 .5 .021 .022 .022							.020 .009 .5 .021 .022 .022	10
15			.027 .005 .5 .029 .031 .035					.037 .1		.029 .006 .6 .027 .035 .037	15
20			.030 .004 .12 .029 .033 .037	.021 .004 .3 .024 .024 .024						.028 .005 .15 .029 .033 .036	20
25			.046 .020 .15 .039 .070 .085	.023 .001 .2 .023 .024 .024						.043 .021 .17 .035 .069 .084	25
30			.065 .022 .16 .057 .091 .104	.052 .033 .3 .029 .076 .095						.063 .024 .19 .055 .093 .104	30
35			.083 .044 .8 .057 .142 .165	.048 .031 .3 .044 .074 .086						.074 .044 .11 .057 .113 .164	35
40			.078 .062 .59 .052 .116 .236					.101 .060 .3 .070 .148 .180		.079 .062 .62 .053 .119 .235	40
45S				.086 .047 .2 .086 .117 .130						.086 .047 .2 .086 .117 .130	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JULY  
FL 330

[illegible]

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JULY  
FL 350

	MEAN										LAT
70N								.559	.046	9	70N
								.555	.614	.637	
65				.117	1	.344	.172	.41	.343	.177	65
				.364	.524	.529	.080	.009	.459	.491	
60				.355	.146	6	.080	.086	.262	.188	60
				.195	.270	.271	.103	.445	.212	.489	
55				.175	.076	7	.213	.172	.236	.052	55
				.051	.131	.236	.178	.341	.192	.491	
50				.077	.073	9	.213	.148	.165	.138	50
				.051	.131	.236	.178	.341	.101	.364	
45	.153	.129	.23	.119	.091	20	.072	.044	.100	.078	45
	.093	.267	.514	.084	.168	.364	.054	.127	.078	.123	
40	.094	.062	.31	.064	.009	5	.091	.074	.087	.050	40
	.082	.109	.256	.067	.072	.075	.066	.117	.077	.118	
35	.056	.018	.18	.070	.036	.11	.054	.004	.069	.028	35
	.052	.076	.087	.061	.113	.124	.051	.056	.068	.097	
30	.072	.011	.4	.052	.018	10	.084	.029	.080	.032	30
	.069	.082	.087	.072	.088	.098	.084	.108	.083	.112	
25	.036	.021	.2	.063	.029	6	.076	.052	.126	.005	25
	.036	.037	.037	.075	.087	.091	.059	.110	.126	.129	
20		.048	.023	.039	.036	4	.045	.022	.091	.038	20
		.041	.071	.021	.065	.096	.039	.078	.116	.119	
15		.030	.068	.032	.012	14	.032	.010	.064	.020	15
		.030	.036	.026	.045	.058	.029	.044	.047	.050	
10		.047	.033	.024	.007	4	.015	1	.051	.017	10
		.029	.090	.022	.029	.034	.031	.031	.049	.068	
5		.033	.014	.025	.003	4	.020	.001	.023	.001	5
		.029	.042	.024	.027	.030	.020	.021	.023	.024	
0		.044	.018	.021	.006	7	.020	.001	.027	.004	0
		.038	.062	.018	.030	.030	.020	.021	.027	.030	
5		.023	.004	.016	.002	8	.015	.005	.026	1	5
		.025	.027	.016	.019	.019	.014	.019	.026		
10		.021	.004	.018	.002	11	.021	0	.019	.003	10
		.021	.024	.018	.021	.022	.021	.021	.020	.022	
15		.027	.008	.026	.006	11	.053	.028	.041	1	15
		.027	.031	.027	.031	.034	.049	.086			
20		.033	.006	.032	.010	8	.050	.025			20
		.034	.036	.029	.038	.051	.053	.071			
25				.053	.018	6	.040	.032			25
				.051	.069	.083	.033	.060			
30				.100	.050	9	.075	.064			30
				.084	.130	.208	.059	.116			
35				.107	.086	25	.157	.111			35
				.082	.133	.342	.130	.297			
40				.148	.096	60			.198	.039	40
				.133	.238	.412			.201	.230	
45S				.187	.102	2					45S
				.187	.256	.284					
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

[illegible]



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JULY  
FL 390

LAT																			LAT	
70N																				70N
65																				65
60																				60
55																				55
50																				50
45																				45
40																				40
35																				35
30																				30
25																				25
20																				20
15																				15
10																				10
5																				5
0																				0
5																				5
10																				10
15																				15
20																				20
25																				25
30																				30
35																				35
40																				40
45S																				45S

JULY  
FL 410

MEAN																			LAT									
70N																			70N									
65									.526 504	.229 631	.25 1.115		.502 1						.526 498	.225 623	.26 1.111	65						
60													.409 434	.167 540	.46 816	.486 521	.120 607	.36 684	.350 340	.125 467	.17 592	.427 453	.153 560	.99 669	60			
55								.396 460	.140 518	.14 551			.394 421	.137 531	.49 577	.420 473	.171 570	.90 745	.384 427	.180 558	.54 631	.403 456	.165 554	.207 666	55			
50								.253 235	.109 370	.27 469		.225 133	.185 351	.4 521	.283 223	.174 537	.54 574	.298 277	.160 422	.609	.305 310	.145 454	.130 586	.292 278	.152 457	.227 586	50	
45	.314 272	.149 437	.3 504				.198 133	.155 373	.27 581	.230 219	.125 357	.30 497	.301 266	.182 479	.45 662	.201 149	.135 298	.51 558	.220 144	.156 405	.37 547	.266 247	.134 402	.120 557	.246 213	.150 404	.313 565	45
40	.241 122	.178 426	.5 519				.101 094	.043 117	.21 213	.238 173	.173 462	.6 476	.191 161	.129 244	.21 551	.132 099	.108 190	.127 416	.210		1	.158 136	.092 227	.31 414	.145 106	.113 217	.212 474	40
35	.060 060	.012 067	.2 071				.084 089	.030 109	.13 144				.096 107	.028 115	.4 121	.094 085	.070 116	.26 287							.090 087	.057 114	.45 212	35
30	.054 054	.003 056	.2 057	.067 065	.026 091	.7 101	.072 078	.025 092	.16 119				.067 060	.017 083	.12 102	.090 085	.045 137	.23 187							.077 068	.035 102	.60 153	30
25													.065 062	.017 084	.9 095										.065 062	.017 084	.9 095	25
20				.061 053	.036 096	.12 133							.053 059	.020 069	.10 061			.068 061	.027 111	.14 145				.068 060	.033 106	.36 140	20	
15													.047 041	.012 055	.4 065										.047 041	.012 055	.4 065	15
10			.122 131	.018 134	.4 135								.036 036	.002 037	.2 037	.058 053	.028 076	.67 140							.061 053	.031 082	.73 141	10
5			.044 037	.017 057	.3 066																				.044 037	.017 057	.3 066	5
0			.083 065	.061 085	.7 210																				.083 065	.061 085	.7 210	0
5							.013 013	.0.090 013	.2 013																.013 013	.0.090 013	.2 013	5
10																												10
15							.030 030	.006 034	.2 036									.053		1					.038 036	.012 048	.3 052	15
20							.033 041	.025 053	.3 058																.033 041	.025 053	.3 058	20
25							.088 078	.034 098	.6 155																.088 078	.034 098	.6 155	25
30							.127 121	.052 185	.5 188																.127 121	.052 185	.5 188	30
35							.215 192	.127 306	.12 466																.215 192	.127 306	.12 466	35
40							.305 286	.140 436	.58 602										.271 312	.107 356	.3 374				.304 292	.139 430	.61 602	40
45S							.303 303	.204 441	.2 498																.303 303	.204 441	.2 498	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E																			

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JULY  
FL 430

	MEAN										LAT
70N											70N
65					.623	.187	.21				65
60					.570	.737	1.116				60
55					.472	.225	.38				55
50					.481	.585	1.036				50
45				.249	.009	.2		.383	.131	.30	45
40				.249	.255	.258		.429	.162	.70	40
35				.257	.024	.3		.410	.513	.559	35
30				.250	.277	.287		.177	.092	.3	30
25				.249	.177	.23		.142	.251	.296	25
20				.177	.437	.656		.246	.079	.12	20
15				.344	.078	.4		.267	.324	.342	15
10				.352	.415	.436		.333	.154	.122	10
5				.434	.209	.17		.338	.495	.614	5
0				.431	.558	.902		.299	.133	.117	0
5				.198	.151	.12		.284	.449	.600	5
10				.145	.268	.566		.291	.160	.218	10
15				.129	.070	.94		.216	.458	.634	15
20				.111	.186	.322		.191	.118	.31	20
25				.078	.035	.18		.158	.297	.490	25
30				.072	.119	.141		.095	.073	.24	30
35				.103	.049	.23		.074	.137	.305	35
40				.094	.135	.223		.090	.043	.46	40
45								.062	.126	.202	45
50											50
55											55
60											60
65											65
70N											70N
65											65
60											60
55											55
50											50
45											45
40											40
35											35
30											30
25											25
20											20
15											15
10											10
5											5
0											0
5											5
10											10
15											15
20											20
25											25
30											30
35											35
40											40
45											45
50											50
55											55
60											60
65											65
70N											70N

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JULY  
FL 450

[illegible]

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JULY  
FL 470

	MEAN								LAT
70N									70N
65					.703 .213 .21 .661 .881 1.147				65
60						.571 .207 .38 .547 .741 .990			60
55						.447 .114 .29 .452 .560 .642	.550 .166 .67 .536 .676 .935	.478 .225 .25 .468 .723 .864	55
50						.315 .068 .3 .279 .358 .405		.425 .164 .122 .429 .581 .725	50
45			.314 .165 .20 .302 .485 .603		.559 .256 .13 .533 .738 1.076	.272 .191 .8 .202 .440 .647	.315 .162 .34 .276 .482 .886	.369 .142 .117 .361 .514 .668	45
40						.192 .095 .91 .168 .280 .468		.231 .126 .31 .203 .343 .544	40
35			.127 .013 .3 .128 .138 .142			.092 .038 .17 .086 .130 .163		.202 .105 .122 .165 .283 .510	35
30	.109 .057 .7 .100 .152 .200		.103 .035 .16 .099 .137 .177			.181 .187 .23 .132 .209 .765		.143 .141 .46 .078 .182 .749	30
25									25
20	.106 .054 .12 .096 .141 .218				.056 .1		.162 .065 .14 .145 .253 .258	.133 .067 .27 .115 .220 .258	20
15									15
10	.154 .025 .4 .156 .175 .184					.086 .042 .67 .077 .109 .203		.090 .044 .71 .077 .116 .205	10
5	.100 .010 .3 .099 .109 .112							.100 .010 .3 .099 .109 .112	5
0	.133 .106 .7 .085 .146 .355							.133 .106 .7 .085 .146 .355	0
5				.024 .002 .2 .024 .025 .026				.024 .002 .2 .024 .025 .026	5
10									10
15							.078 .1	.078 .1	15
20									20
25									25
30									30
35									35
40			.428 .205 .58 .415 .667 .813				.340 .039 .3 .349 .372 .382	.424 .201 .61 .400 .666 .810	40
45S				.364 .210 .2 .364 .506 .565				.364 .210 .2 .364 .506 .565	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
LONGITUDE									

JULY  
FL 490

		MEAN										LAT
70N												70N
65					.880	.276	.21					65
					.774	1.065	1.514					
60						.697	.225	.38				60
						.671	.883	1.287				
55						.547	.130	.29	.651	.168	.67	55
						.558	.674	.817	.664	.785	1.000	
50						.342	.078	.3		.505	.188	50
						.335	.407	.437		.518	.663	
45			.358	.167	.20	.620	.227	.13	.395	.142	.34	45
			.378	.522	.633	.648	.812	.980	.387	.565	.626	
40						.254	.116	.91		.260	.129	40
						.230	.369	.502		.233	.395	
35			.145	.010	.3	.117	.058	.17		.122	.055	35
			.148	.153	.156	.106	.152	.262		.113	.156	
30		.127	.068	.7	.137	.053	.16		.231	.182	.23	30
		.120	.172	.238	.118	.211	.237		.182	.290	.755	
25												25
20		.129	.066	.12		.064	.1		.189	.096	.14	20
		.123	.168	.267					.157	.262	.406	
15												15
10		.172	.021	.4					.104	.043	.67	10
		.165	.191	.204					.094	.125	.249	
5		.102	.037	.3								5
		.124	.129	.132								
0		.140	.092	.7								0
		.107	.189	.327								
5					.028	.004	.2					5
					.028	.031	.032					
10												10
15									.089	.1		15
20												20
25												25
30												30
35												35
40			.528	.283	.58				.437	.026	.3	40
			.459	.727	1.257				.433	.459	.469	
45S					.496	.328	.2					45S
					.496	.718	.810					
	15E	60E	105E	150E	165W	120W	75W	30W	15E			

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JULY  
FL 510

											MEAN			LAT								
70N															70N							
65						1.018	.283	21						1.018	.283	21	65					
						.948	1.331	1.552						.948	1.331	1.552						
60									.806	.201	.38			.806	.201	.38	60					
									.813	.966	1.259			.813	.966	1.259						
55									.664	.139	.29	.816	.176	.67	.699	.241	.25	55				
									.649	.796	.979	.833	.990	1.191	.753	.935	1.059					
50									.435	.135	.3				.608	.201	.122	50				
									.514	.535	.544				.612	.784	.998					
45				.465	.172	.20		.806	.214	.13		.509	.193	.8	.544	.177	.34	45				
				.506	.646	.738		.759	1.011	1.183		.463	.653	.848	.538	.672	.862					
40												.337	.131	.91		.327	.171	.30	40			
												.305	.455	.629		.292	.489	.734				
35				.213	.013	.3						.157	.057	.17				.165	.057	.20	35	
				.222	.223	.223						.157	.182	.292				.166	.221	.289		
30			.148	.082	.7	.197	.107	.18				.291	.145	.23				.236	.137	.46	30	
			.138	.205	.278	.148	.305	.450				.244	.417	.631				.141	.357	.561		
25																					25	
20			.155	.078	.12				.078	1					.213	.082	.14		.182	.086	.27	20
			.153	.201	.316										.210	.334	.361		.162	.253	.356	
15																					15	
10			.192	.024	.4							.112	.045	.67				.116	.048	.71	10	
			.183	.113	.225							.101	.125	.217				.105	.147	.225		
5			.171	.102	.3													.171	.102	.3	5	
			.165	.256	.284													.165	.256	.294		
0			.153	.084	.7													.153	.084	.7	0	
			.109	.253	.302													.109	.253	.302		
5							.047	.006	.2									.047	.006	.2	5	
							.047	.051	.053									.047	.051	.053		
10																					10	
15															.099	1		.099		1	15	
20																					20	
25																					25	
30																					30	
35																					35	
40						.628	.283	.58				.553	.140	.3				.624	.279	.61	40	
						.552	.879	1.300				.468	.660	.739				.548	.869	1.292		
45S									.636	.437	.2							.636	.437	.2	45S	
									.636	.932	1.055							.636	.932	1.055		
15E	60E	105E	150E	165W	120W	75W	30W	15E														
LONGITUDE																						

LONGITUDE



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JULY  
FL 550

	MEAN								LAT
70N									70N
65				1.459 .312 .21 1.539 1.815 1.963				1.459 .312 .21 1.539 1.815 1.963	65
60					1.243 .246 .38 1.180 1.403 1.879			1.243 .246 .38 1.180 1.403 1.879	60
55					1.003 .170 .29 .993 1.158 1.353	1.239 .217 .67 1.254 1.419 1.650	997 .222 .25 960 1.206 1.384	1.132 .239 .121 1.128 1.357 1.631	55
50					.916 .091 .3 .952 .987 1.002		.893 .186 .122 .895 1.089 1.244	.894 .185 .125 .895 1.069 1.241	50
45		.755 .335 .20 .689 .808 1.613		1.160 .221 .13 1.212 1.307 1.503	.870 .205 .8 .964 1.053 1.078	.848 .208 .34 .836 1.027 1.246	.824 .191 .116 .802 1.007 1.243	.846 .234 .191 .818 1.053 1.349	45
40					.681 .207 .91 .643 .844 1.128		.553 .203 .30 .503 .796 .860	.649 .213 .121 .635 .829 1.058	40
35		.470 .118 .3 .527 .561 .575			.444 .120 .17 .413 .553 .717			.448 .120 .20 .430 .565 .708	35
30	.201 .108 .7 .175 .309 .363	.384 .183 .16 .347 .459 .859			.552 .195 .23 .504 .762 .952			.440 .220 .46 .278 .668 .965	30
25									25
20	.397 .179 .12 .373 .546 .788			.421 .1		.378 .162 .14 .320 .492 .775		.388 .167 .27 .369 .522 .850	20
15									15
10	.333 .031 .4 .332 .360 .375				.231 .068 .67 .227 .267 .384			.236 .071 .71 .231 .289 .384	10
5	.543 .377 .3 .307 .829 1.044							.543 .377 .3 .307 .829 1.044	5
0	.226 .114 .7 .182 .259 .459							.226 .114 .7 .182 .259 .459	0
5			.190 .009 .2 .190 .196 .199					.190 .009 .2 .190 .196 .199	5
10									10
15						.321 .1		.321 .1	15
20									20
25									25
30									30
35									35
40		.987 .373 .58 .891 1.424 1.758				.972 .223 .3 1.024 1.155 1.208		.987 .367 .61 .893 1.414 1.749	40
45S			.953 .324 .2 .953 1.173 1.264					.953 .324 .2 .953 1.173 1.264	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
	LONGITUDE								

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JULY  
FL 570

MEAN											LAT
70N											70N
65					1.796 .368 .21 1.904 2.093 2.453					1.796 .368 .21 1.904 2.093 2.453	65
60						1.547 .237 .38 1.495 1.691 2.195				1.547 .237 .38 1.495 1.691 2.195	60
55						1.232 .173 .29 1.259 1.408 1.573	1.496 .230 .67 1.500 1.708 1.982	1.188 .232 .25 1.222 1.379 1.640		1.369 .260 .121 1.347 1.590 1.905	55
50						1.171 .118 .3 1.237 1.260 1.270		1.096 .209 .122 1.085 1.316 1.471		1.098 .208 .125 1.089 1.314 1.471	50
45			949 .305 .20 949 1.084 1.626		1.438 .245 .13 1.499 1.604 1.821	1.159 .142 .8 1.130 1.197 1.459	1.070 .260 .34 1.025 1.348 1.592	1.008 .197 .116 1.981 1.226 1.424		1.048 .252 .191 1.004 1.311 1.619	45
40						.887 .220 .91 .841 1.062 1.380		.708 .216 .30 .735 .966 1.087		.842 .232 .121 .817 1.025 1.294	40
35			620 .040 .3 623 .653 .665			.609 .138 .17 .603 .737 .878				.611 .128 .20 .574 .724 .876	35
30		.258 .121 .7 .263 .362 .443	.598 .176 .16 566 .708 1.003			.683 .188 .23 652 .878 1.132				.589 .228 .46 416 .758 1.110	30
25											25
20		.562 .206 .12 .501 .746 .987			621 .1		.476 .114 .14 .455 .618 .681			.519 .167 .27 .490 .685 .913	20
15											15
10		.495 .049 .4 .475 .534 .572				.348 .877 .67 .340 .407 .496				.356 .083 .71 .349 .422 .550	10
5		.494 .385 .3 .287 .794 1.003								.494 .385 .3 .287 .794 1.003	5
0		.287 .150 .7 .234 .322 .593								.287 .150 .7 .234 .322 .593	0
5				.371 .026 .2 .371 .388 .395						.371 .026 .2 .371 .388 .395	5
10											10
15							.531 .1			.531 .1	15
20											20
25											25
30											30
35											35
40			1.219 .375 .58 1.175 1.635 1.977				1.252 .173 .3 1.354 1.381 1.392			1.221 .368 .61 1.178 1.565 1.974	40
45S				1.294 .323 .2 1.294 1.514 1.604						1.294 .323 .2 1.294 1.514 1.604	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JULY  
FL 590

									MEAN	LAT
70N										70N
65					2.068 .332 .21 2.112 2.342 2.722				2.068 .332 .21 2.112 2.342 2.722	65
60						1.858 .265 .38 1.777 2.004 2.501			1.858 .265 .38 1.777 2.004 2.501	60
55						1.483 .173 .29 1.527 1.644 1.742	1.794 .262 .67 1.764 2.045 2.396	1.435 .239 .25 1.419 1.660 1.876	1.645 .291 .121 1.647 1.897 2.376	55
50						1.401 .131 .3 1.450 1.506 1.529		1.320 .218 .122 1.348 1.529 1.681	1.322 .217 .125 1.349 1.532 1.679	50
45			1.183 .317 .19 1.192 1.420 1.778		1.664 .236 .13 1.660 1.920 2.025	1.474 .216 .8 1.415 1.742 1.746	1.342 .239 .34 1.296 1.576 1.873	1.220 .194 .115 1.187 1.418 1.641	1.280 .254 .189 1.246 1.541 1.856	45
40						1.154 .249 .91 1.095 1.391 1.670		.898 .196 .30 .875 1.123 1.244	1.090 .261 .121 1.069 1.315 1.635	40
35			.919 .095 .3 .856 .990 1.045			.812 .168 .17 .818 .949 1.116			.828 .164 .20 .819 .950 1.111	35
30	.377 .138 .7 .352 .552 .586	.820 .202 .16 .767 .970 1.236				.848 .263 .23 .806 .910 1.547			.767 .281 .46 .632 .916 1.496	30
25										25
20	.758 .227 .12 .706 .951 1.217			.821 .1		.662 .127 .14 .646 .756 .942		.711 .184 .27 .691 .920 1.141		20
15										15
10	.694 .111 .4 .670 .779 .859					.471 .110 .67 .444 .534 .806		.483 .122 .71 .445 .561 .841		10
5	.562 .380 .3 .329 .851 1.066							.562 .380 .3 .329 .851 1.066		5
0	.406 .171 .7 .369 .487 .741							.406 .171 .7 .369 .487 .741		0
5			.587 .097 .2 .587 .652 .679					.587 .097 .2 .587 .652 .679		5
10										10
15							.876 .1	.876 .1		15
20										20
25										25
30										30
35										35
40		1.470 .381 .58 1.407 1.892 2.253					1.528 .217 .3 1.579 1.705 1.757		1.473 .375 .61 1.409 1.782 2.252	40
45S			1.636 .323 .2 1.636 1.855 1.945						1.636 .323 .2 1.636 1.855 1.945	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E	
	LONGITUDE									

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUGUST  
FL 190

MEAN												LAT
70N												70N
65					.043 .012 8 .042 .057 .062						.043 .012 8 .042 .057 .062	65
60						.047 .016 31 .050 .063 .073					.047 .016 31 .050 .063 .073	60
55						.053 .027 36 .048 .089 .111	.052 .017 54 .051 .066 .096		.052 .014 21 .053 .068 .074		.053 .020 111 .051 .069 .099	55
50						.055 .019 84 .055 .073 .092			.061 .019 117 .059 .078 .099		.059 .019 201 .058 .075 .097	50
45			.067 .017 17 .066 .082 .095		.046 .030 9 .039 .076 .100	.045 .009 4 .045 .052 .057	.067 .022 31 .064 .093 .104		.055 .014 110 .056 .069 .085		.058 .018 171 .058 .076 .097	45
40	.083	1				.056 .021 106 .055 .078 .102			.065 .018 22 .063 .081 .100		.058 .021 129 .056 .079 .102	40
35			.058 .012 4 .059 .069 .073		.060	.042 .015 12 .037 .051 .077					.047 .016 17 .042 .062 .081	35
30		.037 .022 8 .032 .053 .075	.047 .021 15 .041 .074 .087			.062 .018 23 .061 .077 .101					.053 .022 46 .039 .077 .094	30
25												25
20		.035 .008 11 .037 .042 .045			.047 .012 4 .051 .057 .058	.078	1	.054 .014 10 .060 .063 .072		.045 .016 26 .034 .061 .076		20
15		.015 .009 5 .011 .022 .029								.015 .009 5 .011 .022 .029		15
10		.036 .019 8 .031 .053 .068				.028 .010 8 .027 .037 .044				.032 .016 16 .022 .047 .063		10
5												5
0												0
5				.022 .005 3 .023 .026 .028				.057 .002 2 .057 .058 .059		.036 .018 5 .028 .056 .059		5
10												10
15			.031 .002 2 .031 .032 .033					.017 .002 2 .017 .016 .018		.024 .007 4 .024 .031 .033		15
20												20
25												25
30												30
35				.031 .023 2 .031 .047 .053						.031 .023 2 .031 .047 .053		35
40			.039 .009 63 .038 .047 .059							.039 .009 63 .038 .047 .059		40
45S				.044 .002 2 .044 .045 .046						.044 .002 2 .044 .045 .046		45S
15E	60E	105E	150E	165W	120W	75W	30W	15E				
LONGITUDE												

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUGUST  
FL 210

MEAN											LAT													
70N											70N													
65					.051 .052	.009 .062	8 .064				.051 .052	.009 .062	8 .064	65										
60								.051 .052	.021 .066	31 .101			.051 .052	.021 .066	31 .101	60								
55								.051 .050	.025 .065	36 .107	.056 .056	.016 .073	54 .085	.055 .054	.013 .069	22 .077	.054 .048	.020 .071	112 .085	55				
50								.056 .056	.021 .076	85 .092				.065 .062	.021 .087	127 .121	.061 .053	.022 .082	212 .117	50				
45	.061 .058	.010 .068	4 .076		.065 .065	.016 .081	17 .093		.045 .033	.027 .077	10 .085	.046 .045	.005 .050	4 .053	.066 .065	.027 .088	31 .127	.056 .057	.015 .071	111 .089	.058 .057	.019 .076	177 .097	45
40	.052 .050	.015 .065	4 .071					.043 .025	.034 .069	3 .087		.060 .057	.024 .084	112 .112	.056 .058	.021 .077	12 .088	.063 .067	.026 .082	26 .114	.059 .057	.024 .084	157 .112	40
35	.054 .056	.022 .081	15 .085		.052 .054	.020 .062	8 .087		.020 .020	.010 .030	8 .031	.044 .043	.017 .056	11 .080							.045 .042	.022 .063	42 .087	35
30		.035 .028	.023 .058	13 .079	.049 .046	.018 .071	15 .080					.067 .066	.019 .080	23 .110							.054 .055	.024 .075	51 .085	30
25	.106	1			.055		1														.081 .081	.026 .098	2 .105	25
20		.036 .038	.011 .043	15 .055	.027 .024	.016 .045	5 .047		.026 .025	.013 .034	21 .052				.055 .058	.017 .071	10 .079				.035 .032	.017 .051	51 .073	20
15		.013 .011	.009 .019	5 .029																	.013 .011	.009 .019	5 .029	15
10		.035 .029	.023 .055	9 .074								.026 .026	.008 .032	7 .039							.031 .022	.019 .048	16 .071	10
5																								5
0		.026 .026	.005 .031	3 .033																	.026 .026	.005 .031	3 .033	0
5						.015 .015	.004 .019	3 .021							.063 .063	.008 .067	2 .069				.034 .021	.024 .061	5 .068	5
10				.032 .032	.006 .035	2 .037															.032 .032	.006 .035	2 .037	10
15				.020		1	.018 .016	.008 .026	8 .033						.022 .022	.004 .025	2 .026				.019 .017	.007 .026	11 .033	15
20							.008 .008	.006 .011	2 .013												.008 .008	.006 .011	2 .013	20
25							.021		1												.021		1	25
30				.043		1															.043		1	30
35				.034 .038	.017 .047	14 .062	.034 .036	.014 .041	12 .058												.034 .025	.015 .047	26 .064	35
40				.040 .039	.009 .049	62 .061															.040 .039	.009 .049	62 .061	40
45S					.039 .043	.009 .045	4 .047														.039 .043	.009 .045	4 .047	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E															
LONGITUDE																								

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUGUST  
FL 230

												MEAN			LAT										
70N																	70N								
65						.052 .048	.012 .066	.8 .073							.052 .048	.012 .066	.8 .073	65							
60									.053 .050	.022 .074	.31 .092				.053 .050	.022 .074	.31 .092	60							
55									.053 .054	.027 .068	.36 .106	.059 .056	.020 .079	.54 .104	.058 .055	.015 .077	.22 .083	.057 .049	.022 .075	.112 .101	55				
50									.056 .057	.024 .078	.85 .097				.068 .066	.022 .089	.121 .121	.063 .055	.023 .085	.206 .117	50				
45	.075 .075	.006 .078	.2 .080		.065 .067	.017 .085	.17 .093		.038 .050	.018 .054	.9 .058	.049 .051	.017 .063	.4 .070	.063 .062	.023 .083	.31 .115	.058 .057	.018 .075	.111 .102	.059 .053	.020 .076	.174 .106	45	
40	.043 .043	.013 .051	.2 .055						.052		.1	.062 .059	.025 .090	.107 .113	.085 .079	.018 .095	.7 .116	.065 .063	.020 .083	.22 .106	.063 .060	.025 .089	.139 .114	40	
35	.084 .084	.012 .092	.2 .096		.076 .060	.029 .112	.6 .124		.035 .035	.014 .045	.2 .048	.052 .047	.022 .071	.14 .099				.059 .046	.027 .093	.24 .118				35	
30		.042 .045	.023 .060	.8 .079	.049 .046	.016 .066	.15 .079					.068 .070	.021 .081	.23 .118				.057 .042	.023 .078	.46 .105				30	
25																								25	
20		.037 .040	.010 .043	.12 .053					.041 .039	.005 .045	.3 .048				.055 .058	.019 .066	.10 .087		.045 .042	.016 .061	.25 .080				20
15		.015 .012	.008 .019	.5 .029	.013		.1											.014 .013	.007 .016	.6 .028				15	
10		.043 .043	.021 .057	.8 .080								.028 .025	.011 .035	.7 .045				.036 .034	.018 .051	.15 .076				10	
5																								5	
0		.023		.1														.023		.1				0	
5					.014 .014	.004 .017	.3 .019								.061 .061	.005 .064	.2 .065		.032 .019	.023 .059	.5 .064				5
10																								10	
15					.030		.1								.022 .022	.001 .023	.2 .023		.025 .023	.004 .028	.3 .030				15
20					.029		.1											.029		.1				20	
25					.078		.1											.078		.1				25	
30																								30	
35					.042 .039	.015 .054	.8 .066		.033 .033	.019 .051	.6 .061				.038		.1		.038 .035	.016 .054	.15 .066				35
40					.043 .041	.013 .055	.62 .073												.043 .040	.013 .055	.62 .073				40
45S					.047 .047	.001 .048	.2 .048												.047 .047	.001 .048	.2 .048				45S
15E	60E	105E	150E	165W	120W	75W	30W	15E																	
LONGITUDE																									

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUGUST  
FL 250

									MEAN	LAT
70N										70N
65					.054 .008 8 .053 .059 .069				.054 .008 8 .053 .059 .069	65
60						.055 .025 31 .050 .080 .103			.055 .025 31 .050 .080 .103	60
55						.056 .030 36 .052 .075 .121	.061 .020 54 .060 .080 .100	.059 .015 21 .053 .075 .086	.059 .023 111 .056 .079 .100	55
50					.055 1	.057 .026 64 .059 .084 .100		.070 .023 123 .067 .095 .120	.065 .025 208 .057 .090 .119	50
45	.064 1		.070 .026 17 .062 .099 .116		.044 .028 9 .042 .072 .097	.053 .005 4 .051 .057 .060	.071 .030 31 .062 .090 .147	.061 .019 113 .058 .079 .106	.062 .023 175 .058 .081 .120	45
40	.003 1				.095 1	.066 .026 107 .062 .094 .116	.075 .024 4 .083 .092 .097	.067 .020 22 .064 .086 .110	.066 .026 135 .063 .093 .118	40
35	.070 1		.058 .009 5 .056 .067 .070		0 .000 1	.055 .028 15 .051 .099 .103			.054 .026 22 .043 .081 .102	35
30	.088 1	.046 .026 8 .049 .071 .081	.048 .016 15 .048 .061 .080			.069 .020 24 .066 .086 .114			.059 .023 48 .045 .083 .101	30
25	.059 1								.059 1	25
20		.036 .008 11 .037 .044 .048	.042 1		.040 .014 6 .041 .049 .063		.058 .023 10 .057 .084 .098		.045 .019 28 .034 .058 .097	20
15		.019 .007 6 .016 .029 .029							.019 .007 6 .016 .029 .029	15
10		.045 .022 8 .047 .059 .084				.032 .013 7 .034 .041 .053			.039 .020 15 .037 .055 .080	10
5										5
0		.030 1							.030 1	0
5				.013 .005 3 .014 .017 .018			.062 .004 2 .062 .065 .066		.033 .024 5 .018 .061 .065	5
10										10
15							.022 .003 2 .022 .023 .024		.022 .003 2 .022 .023 .024	15
20										20
25										25
30										30
35			.054 .011 2 .054 .061 .064	.036 .010 2 .036 .043 .046					.045 .013 4 .045 .055 .063	35
40			.050 .027 63 .044 .057 .137						.050 .027 63 .044 .057 .137	40
45S				.048 .002 2 .048 .049 .050					.048 .002 2 .048 .049 .050	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E	
	LONGITUDE									

**CODE:**

MEAN	ST. DEV.	N
50%	84%	98%

AUGUST  
FL 270

		MEAN										LAT
70N												70N
65						.058 .015 8 .057 .077 .082					.058 .015 8 .057 .077 .082	65
60							.057 .026 31 .057 .083 .101				.057 .026 31 .057 .083 .101	60
55							.060 .030 36 .055 .082 .139	.067 .023 54 .066 .089 .113	.059 .017 22 .056 .077 .090		.063 .025 112 .052 .085 .114	55
50							.061 .029 83 .061 .094 .117		.074 .026 120 .070 .101 .125		.069 .028 203 .068 .098 .121	50
45	.086 .018 2 .086 .098 .103		.069 .028 17 .066 .089 .125		.049 .027 9 .044 .079 .096	.062 .016 5 .059 .079 .081	.069 .027 32 .061 .096 .138	.063 .018 112 .061 .082 .099		.064 .022 177 .061 .085 .116		45
40	.104 1				.057 .002 3 .057 .058 .059	.072 .029 109 .068 .101 .132	.074 .022 3 .087 .090 .092	.073 .026 23 .070 .095 .126		.072 .028 139 .068 .098 .132		40
35	.065 .022 7 .070 .077 .100		.057 .022 8 .063 .075 .079		.051 .027 2 .051 .069 .077	.056 .025 15 .058 .075 .104				.058 .024 32 .050 .077 .105		35
30		.050 .030 8 .051 .082 .093	.049 .015 15 .050 .060 .081			.073 .023 23 .073 .088 .131				.061 .025 46 .045 .084 .112		30
25		.021 1				.104 1				.063 .042 2 .063 .091 .102		25
20		.032 .013 15 .034 .042 .054			.033 .019 8 .033 .047 .068	.087 .021 2 .087 .101 .107	.055 .020 10 .052 .062 .100			.042 .023 35 .039 .057 .108		20
15		.021 .011 14 .020 .032 .040	.031 1			.079 .009 2 .079 .085 .088				.029 .021 17 .026 .037 .082		15
10		.038 .024 12 .031 .037 .086				.033 .016 7 .025 .044 .062	.044 1			.036 .021 20 .026 .055 .082		10
5		.028 1								.028 1		5
0												0
5				.012 .005 3 .014 .015 .016			.063 .004 2 .063 .066 .067			.032 .026 5 .016 .062 .066		5
10												10
15				.022 .001 3 .022 .023 .024			.030 .002 2 .030 .031 .031			.025 .004 5 .024 .029 .031		15
20							.043 .013 3 .038 .053 .059			.043 .013 3 .038 .053 .059		20
25												25
30			.078 .021 4 .071 .093 .110							.078 .021 4 .071 .093 .110		30
35			.061 .015 4 .059 .073 .084	.040 1						.057 .016 5 .058 .069 .083		35
40			.057 .034 62 .049 .067 .151							.057 .034 62 .049 .067 .151		40
45S				.049 .002 2 .049 .050 .051						.049 .002 2 .049 .050 .051		45S
15E	60E	105E	150E	165W	120W	75W	30W	15E				



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUGUST  
FL 290

	MEAN										LAT
70N											70N
65					.066	.015	8				65
60					.067	.073	.092				60
55						.061	.028	31			55
50						.062	.091	.107			50
45						.069	.039	36	.078	.037	45
40						.061	.109	.173	.069	.108	40
35						.068	.036	83	.085	.010	35
30						.064	.101	.156	.086	.090	30
25						.069	.055	6	.079	.050	25
20						.055	.095	.187	.063	.038	20
15						.079	.020	113	.067	.020	15
10						.069	.031	198	.059	.090	10
5						.079	.016	8	.076	.027	5
0						.061	.075	.102	.073	.098	0
5											5
10											10
15											15
20											20
25											25
30											30
35											35
40											40
45											45
50											50
55											55
60											60
65											65
70N											70N

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUGUST  
FL 310

	MEAN										LAT
70N											70N
65					.093	.033	8				65
60					.094	.115	.144				60
55								.075	.057	31	55
50								.064	.105	230	50
45					.127	.048	4	.075	.046	36	45
40					.117	.165	.197	.065	.111	184	40
35					.044		1	.075	0.000	2	35
30					.215	.041	2	.075	.075	.075	30
25					.215	.243	.254	.071	.119	199	25
20	.068	.011	9		.070	.027	17	.103	.097	7	20
15	.064	.081	.085		.059	.105	.124	.055	.145	305	15
10	.070	.019	28		.050	.006	2	.075	.029	116	10
5	.053	.087	.114		.050	.054	.056	.071	.102	140	5
0	.063	.017	18		.053	.014	13	.059	.021	13	0
5	.061	.081	.092		.052	.072	.075	.051	.092	137	5
10	.069	.013	9	.051	.027	21		.050	.024	4	10
15	.067	.085	.091	.046	.072	.120		.046	.068	.084	15
20	.056	.027	6	.033	.011	12	.044	.076	.090		20
25	.046	.063	.109	.036	.042	.051	.046	.049	.051	.037	25
30							.043			1	30
35											35
40											40
45											45
50											50
55											55
60											60
65											65
70											70
75											75
80											80
85											85
90											90
95											95
100											100
105											105
110											110
115											115
120											120
125											125
130											130
135											135
140											140
145											145
150											150
155											155
160											160
165											165
170											170
175											175
180											180
185											185
190											190
195											195
200											200
205											205
210											210
215											215
220											220
225											225
230											230
235											235
240											240
245											245
250											250
255											255
260											260
265											265
270											270
275											275
280											280
285											285
290											290
295											295
300											300
305											305
310											310
315											315
320											320
325											325
330											330
335											335
340											340
345											345
350											350
355											355
360											360
365											365
370											370
375											375
380											380
385											385
390											390
395											395
400											400
405											405
410											410
415											415
420											420
425											425
430											430
435											435
440											440
445											445
450											450
455											455

LONGITUDE



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUGUST  
FL 350

MEAN														LAT
70N														70N
65														65
60														60
55														55
50														50
45														45
40														40
35														35
30														30
25														25
20														20
15														15
10														10
5														5
0														0
5														5
10														10
15														15
20														20
25														25
30														30
35														35
40														40
45S														45S
15E	60E	105E	150E	165W	120W	75W	30W	15E						
LONGITUDE														

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUGUST  
FL 370

	MEAN										LAT
70N								.453	.029	.8	70N
								.462	.483	.485	
65					.132	.069	.8	.204	.139	.66	65
					.122	.217	.231	.147	.386	.485	
60					.236	.116	.20	.250	.111	.29	60
					.215	.378	.443	.245	.361	.443	
55					.263	.123	.30	.202	.086	.5	55
					.310	.394	.431	.163	.274	.349	
50					.115	.107	.43	.191	.135	.55	50
					.073	.176	.414	.195	.318	.469	
45	.149	.060	.10		.082	.047	.18	.127	.103	.27	45
	.137	.218	.248		.074	.102	.206	.078	.276	.393	
40	.112	.062	.10		.064	.029	.23	.074	.057	.19	40
	.105	.159	.238		.059	.093	.134	.072	.118	.277	
35	.054	.016	.5		.054	.023	.29	.077	.047	.38	35
	.050	.069	.079		.049	.072	.109	.074	.105	.247	
30	.068	.013	.6	.068	.050	.13		.057	.027	.74	30
	.069	.080	.085	.061	.088	.184		.050	.084	.130	
25	.042		1	.063	.010	.6	.064	.050	.019	.61	25
				.060	.075	.078	.062	.044	.069	.087	
20				.046	.016	.16	.039	.044	.018	.23	20
				.043	.060	.080	.032	.044	.047	.049	
15				.030	.010	.12	.023	.028	.015	.14	15
				.030	.042	.046	.028	.028	.040	.063	
10				.054	.028	.12	.022	.024	.011	.16	10
				.046	.076	.111	.022	.019	.037	.047	
5				.019	.006	.4		.026	.015	.10	5
				.020	.025	.026		.028	.033	.058	
0				.039		1		.024	.008	.15	0
								.023	.033	.041	
5								.026	.012	.23	5
								.024	.039	.053	
10					.017	.004	.3	.029	.008	.17	10
					.015	.020	.022	.026	.034	.048	
15					.028	.004	.2	.037	.014	.12	15
					.028	.030	.031	.036	.046	.071	
20					.025	.011	.2	.045	.011	.7	20
					.025	.032	.036	.047	.055	.056	
25					.041	.012	.8	.106		1	25
					.041	.053	.056				
30					.122	.122	.14	.138	.049	.3	30
					.060	.283	.388	.107	.175	.203	
35					.161	.103	.29	.167	.066	.8	35
					.113	.270	.396	.160	.237	.272	
40					.250	.118	.63				40
					.255	.366	.474				
45S					.311	.092	.2				45S
					.311	.374	.399				
	15E	60E	105E	150E	165W	120W	75W	30W	15E		

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUGUST  
FL 390

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUGUST  
FL 410

	MEAN										LAT																			
70N											70N																			
65					.400	.153	8		489	1		65																		
60					.400	.514	.655					60																		
55					.409	.073	3	.353	.086	5	.360	.101	42	.468	.103	21	.441	.079	12	.400	.108	83	55							
50					.458	.461	.462	.376	.427	.438	.370	.460	.502	.493	.557	.605	.448	.492	.575	.419	.495	.581	50							
45					.321	.148	22				.293	.148	56	.356	.134	81	.329	.114	68	.329	.136	227	45							
40					.374	.458	510				.261	.435	521	.389	.473	.576	.329	.462	.503	.337	.464	.534	40							
35					.229	.133	34	.160	.074	22	.245	.131	123	.314	.134	23	.245	.113	123	.242	.125	325	35							
30					.190	.379	447	.174	.225	278	.246	.394	.485	.313	.468	.487	.239	.359	.460	.236	.392	.481	30							
25	.177	.020	4					.103	.053	22	.145	.074	25	.202	.150	64	.226	.129	50	.145	.077	51	.200	.101	116	.185	.115	332	25	
20	.176	.197	200					.093	.119	252	.125	.218	298	.172	.351	576	.211	.385	457	.117	.202	.355	.192	.314	.423	.118	.299	.456	20	
15	.093	.033	10					.095	.056	15	.063	.007	5	.169	.093	43	.110	.063	138	.153	.061	8	.127	.075	22	.121	.073	241	15	
10	.082	.112	.168					.089	.124	231	.065	.069	.069	.146	.275	375	.095	.155	301	.126	.189	.282	.096	.185	.301	.099	.171	.322	10	
5	.087	.004	4					.084	.055	12				.070	.023	11	.089	.058	17							.083	.048	44	5	
0	.066	.091	.091					.060	.117	209				.074	.094	103	.066	.117	236							.075	.104	.228	0	
70S	.079	.013	4					.085	.075	8	.068	.021	15	.062	.020	8	.095	.045	23							.081	.044	58	70S	
65	.079	.091	.096					.055	.085	.109				.064	.082	.090	.089	.121	.207							.062	.110	.227	65	
60								.066	.004	3				.047	.018	8										.044	.035	12	60	
55								.004	.009	.012				.049	.064	.070										.041	.056	.119	55	
50								.038	.024	6				.046	.016	4				.068	.031	10				.057	.028	33	50	
45								.054	.090	.093				.048	.061	.062				.074	.101	.112				.050	.050	.107	45	
40								.071	.052	4				.017	.006	2											.033	.033	17	40
35								.051	.110	.153				.017	.021	.023											.024	.037	.126	35
30								.022	.007	11				.026	.000	2											.042	.029	27	30
25								.067	.035	10				.026	.026	.026	.035	.008	7								.029	.070	.119	25
20								.069	.095	.132				.025	.026	.029	.038	.041	.043								.023	.009	7	20
15								.022	.007	3				.025	.010	4											.023	.030	.046	15
10								.023	.028	.030				.021	.032	.040											.023	.030	.046	10
5																														5
0																														0
5																														5
10																														10
15																														15
20																														20
25																														25
30																														30
35																														35
40																														40
45S																														45S

15E

60E

105E

150E

165W

120W

75W

30W

15E

LONGITUDE





CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUGUST  
FL 450

	MEAN										LAT
70N											70N
65					.555	.146	.8				65
60					.557	.627	.800				60
55						.454	.122	.31			55
50						.463	.555	.667			50
45						.354	.180	.36	.446	.177	45
40						.310	.468	.713	.459	.567	40
35						.303	.153	.65			35
30						.299	.452	.563			30
25							.312	.129	.116		25
20							.310	.444	.551		20
15							.263	.114	.110		15
10							.262	.380	.497		10
5							.145	.077	.105		5
0							.131	.182	.426		0
5								.085	.028	.10	5
10								.081	.106	.144	10
15								.122	.074	.23	15
20								.110	.140	.330	20
25											25
30											30
35											35
40											40
45S											45S
15E	60E	105E	150E	165W	120W	75W	30W	15E			
LONGITUDE											

[illegible]

MEAN	ST. DEV.	N
50%	84%	98%

MEAN LAT

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUGUST  
FL 510

MEAN										LAT
70N										70N
65					.968 .227 8 1.016 1.108 1.334					65
60						.832 .206 .31 .811 1.035 1.246				60
55						.597 .144 .36 .604 .754 .875	.773 .223 .53 .747 .858 1.300	.689 .155 .21 .658 .855 .974	.699 .203 .110 .534 .868 1.262	55
50						.541 .176 .85 .523 .714 .890		.556 .178 .116 .536 .680 1.073	.549 .177 .201 .534 .697 .985	50
45			.296 .117 .17 .258 .414 .540		.641 .236 .9 .638 .919 .992	.707 .211 .4 .769 .893 .907	.455 .124 .31 .440 .577 .712	.484 .135 .110 .479 .629 .780	.474 .161 .171 .452 .636 .869	45
40						.306 .102 .105 .287 .390 .624		.302 .125 .22 .283 .412 .553	.305 .106 .127 .287 .392 .598	40
35			.206 .071 .3 .252 .257 .260			.177 .061 .10 .154 .251 .288			.184 .065 .13 .154 .262 .288	35
30	.141 .109 .8 .098 .209 .359		.145 .048 .15 .128 .205 .232			.221 .101 .23 .191 .286 .500			.182 .097 .46 .124 .240 .487	30
25										25
20	.149 .087 .11 .130 .231 .324			.178 .027 .2 .178 .196 .204			.126 .048 .10 .133 .151 .211		.142 .070 .23 .136 .214 .300	20
15	.153 .135 .4 .083 .243 .369								.153 .135 .4 .083 .243 .369	15
10	.157 .071 .8 .152 .246 .255					.078 .017 .7 .081 .095 .099			.120 .066 .15 .085 .193 .254	10
5										5
0										0
5				.049 .026 .3 .045 .071 .081			.116 .013 .2 .116 .125 .128		.076 .039 .5 .083 .112 .127	5
10										10
15							.145 .003 .2 .145 .147 .148		.145 .003 .2 .145 .147 .148	15
20										20
25										25
30										30
35										35
40			.633 .254 .63 .618 .891 1.241						.633 .254 .63 .618 .891 1.241	40
45S				.763 .198 .2 .763 .897 .952					.763 .198 .2 .763 .897 .952	45S
15E	60E	105E	150E	165W	120W	75W	30W	15E		

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUGUST  
FL 530

											MEAN			LAT		
70N																70N
65									1.161	.237	8					65
60									1.134	1.210	1.653					60
55												1.007	.245	31		55
50												1.034	1.213	1.334		50
45												.721	.168	36		45
40												.713	.878	1.013		40
35												.695	.222	85		35
30												.660	.930	1.064		30
25												.671	.194	9		25
20												.704	.866	961		20
15												.772	.172	4		15
10												.686	.875	.881		10
5												.611	.149	31		5
0												.605	.766	.909		0
5S												.602	.154	110		5S
10S												.577	.780	.884		10S
15S												.698	.212	116		15S
20S												.666	.851	1.341		20S
25S												.387	.117	105		25S
30S												.352	.494	.736		30S
35S												.301	.101	10		35S
40S												.287	.415	.466		40S
45S												.317	.100	23		45S
												.304	.418	.519		

									MEAN	LAT
70N										70N
65					1.440 .316 8 1.309 1.769 1.979				1.440 .316 8 1.309 1.769 1.979	65
60						1.278 .253 31 1.322 1.476 1.618			1.278 .253 31 1.322 1.476 1.618	60
55						.948 .208 36 .922 1.143 1.337	1.217 .299 53 1.173 1.350 1.975	1.037 .202 21 1.023 1.196 1.429	1.094 .283 110 .922 1.307 1.812	55
50						.904 .250 84 .898 1.146 1.329		.887 .216 116 .871 1.064 1.386	.694 .231 200 .825 1.126 1.346	50
45			.482 .121 17 .449 .585 .768		.875 .262 9 .872 1.136 1.289	.973 .182 4 1.008 1.138 1.169	.773 .193 31 .717 .984 1.218	.761 .162 109 .750 .949 1.105	.747 .197 170 .718 .959 1.171	45
40						.561 .147 105 .543 .681 1.062		.577 .174 22 .516 .801 .834	.564 .152 127 .536 .708 .965	40
35			.526 .058 3 .565 .568 .569			.437 .118 10 .451 .582 .590			.457 .113 13 .474 .569 .588	35
30		.222 .108 8 .162 .326 .418		.286 .109 15 .239 .333 .562		.457 .103 23 .445 .538 .692			.360 .145 46 .282 .512 .660	30
25										25
20		.277 .153 11 .227 .441 .543			.440 .029 2 .440 .460 .468		.293 .063 10 .290 .348 .401		.298 .122 23 .293 .424 .524	20
15		.279 .148 4 .265 .417 .474							.279 .146 4 .265 .417 .474	15
10		.277 .090 6 .271 .377 .427				.183 .040 7 .177 .231 .242			.233 .085 15 .195 .295 .421	10
5										5
0										0
5				.205 .019 3 .191 .219 .230			.200 .036 2 .200 .224 .235		.203 .028 5 .191 .233 .236	5
10										10
15							.246 .025 2 .246 .262 .269		.246 .025 2 .246 .262 .269	15
20										20
25										25
30										30
35										35
40			1.006 .341 63 1.029 1.366 1.603						1.006 .341 63 1.029 1.366 1.603	40
45S				1.040 .141 2 1.040 1.135 1.174					1.040 .141 2 1.040 1.135 1.174	45S
15E	60E	105E	150E	165W	120W	75W	30W	15E		

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUGUST  
FL 570

	MEAN								LAT
70N									70N
65				1.927 .379 8 1.883 2.346 2.374				1.927 .379 8 1.883 2.346 2.374	65
60					1.558 .311 .31 1.585 1.845 1.983			1.558 .311 .31 1.585 1.845 1.983	60
55					1.169 .227 .35 1.151 1.432 1.518	1.500 .286 .53 1.461 1.678 2.146	1.317 .237 .21 1.282 1.571 1.724	1.358 .298 109 1.351 1.531 2.067	55
50					1.115 .276 .85 1.138 1.352 1.568		1.093 .218 116 1.083 1.292 1.611	1.103 .244 201 1.109 1.336 1.627	50
45		671 .139 17 635 .782 .981		1.057 .215 9 1.098 1.269 1.283	1.211 .209 4 1.243 1.387 1.454	1.025 .246 31 1.940 1.321 1.571	959 .180 108 1.973 1.104 1.328	953 .220 169 1.941 1.164 1.462	45
40					778 .182 105 746 .940 1.344		766 .170 22 1.851 .910 1.022	776 .180 127 1.747 .936 1.217	40
35		649 .064 3 606 .696 .734			579 .120 10 553 .717 766			595 .113 13 1.601 .740 765	35
30	.352 .120 8 .342 .451 .560	475 .163 15 440 .601 .871			635 .153 23 612 .741 1.009			534 .187 46 1.415 .666 983	30
25									25
20	.430 .175 11 411 .660 .713		618 .059 2 618 .658 .675			.431 .091 10 423 .520 .585		447 .146 23 1.425 .609 712	20
15	.544 .271 4 509 .812 .875							544 .271 4 509 .812 .875	15
10	.402 .143 8 377 .584 .611				299 .080 7 282 .365 .434			354 .129 15 1.309 .485 608	10
5									5
0									0
5			.336 .023 3 340 .354 .360			.274 .065 2 274 .317 .335		311 .054 5 338 .348 .359	5
10									10
15						.387 .022 2 387 .402 .408		387 .022 2 387 .402 .408	15
20									20
25									25
30									30
35									35
40		1.200 .379 63 1.266 1.585 1.860						1.200 .379 63 1.266 1.585 1.860	40
45S			1.300 .193 2 1.300 1.431 1.485					1.300 .193 2 1.300 1.431 1.485	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
	LONGITUDE								

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUGUST  
FL 590

		MEAN										LAT
70N												70N
65					2 201 .382 8 2 079 2 636 2 681						2 201 .382 8 2 079 2 636 2 681	65
60						1 826 .331 31 1 835 2 109 2 364					1 826 .331 31 1 835 2 109 2 364	60
55						1 433 .225 35 1 414 1 640 1 918	1 760 .256 53 1 728 1 974 2 281	1 544 .213 21 1 493 1 770 2 020		1 613 .280 109 1 591 1 855 2 240		55
50						1 378 .307 85 1 424 1 606 1 901		1 326 .258 116 1 321 1 517 1 849		1 348 .281 201 1 346 1 574 1 889		50
45			922 .160 17 944 1 076 1 199		1 304 .206 9 1 337 1 489 1 585	1 606 .296 4 1 752 1 790 1 819	1 322 .285 31 1 254 1 515 2 047	1 189 .191 107 1 176 1 370 1 583		1 203 .245 168 1 159 1 424 1 790		45
40						1 044 .227 105 1 026 1 247 1 643		962 .179 22 961 1 154 1 254		1 030 .222 127 1 014 1 244 1 626		40
35			719 .060 3 739 .767 .778			786 .169 10 773 .966 1 021				771 .153 13 745 .956 1 018		35
30		.519 .149 8 .465 .716 .755	675 .132 15 692 .773 .924			859 .157 23 882 .990 1 134				740 .197 46 610 .950 1 082		30
25												25
20		.620 .176 11 .575 .782 .956			876 .010 2 876 .883 886		590 .078 10 577 .668 .708			629 .153 23 599 .784 .948		20
15		.674 .277 4 .646 .948 1 011								674 .277 4 646 .948 1 011		15
10		.546 .158 8 .535 .685 .778				.427 .065 7 .429 .496 .526				490 .137 15 436 .652 .763		10
5												5
0												0
5				.466 .046 3 .447 .503 .526			.392 .074 2 .392 .441 .462			436 .069 5 447 .488 .524		5
10												10
15							.542 .112 2 .542 .617 .649			542 .112 2 542 .617 .649		15
20												20
25												25
30												30
35												35
40			1 499 .387 62 1 556 1 866 2 228							1 499 .387 62 1 556 1 866 2 228		40
45S				1 561 .246 2 1 561 1 729 1 797						1 561 .246 2 1 561 1 729 1 797		45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E			



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SEPTEMBER  
FL 190

	MEAN								LAT
70N									70N
65				.036 .011 8 .039 .046 .050				.036 .011 8 .038 .046 .050	65
60					.047 .018 25 .045 .064 .087			.047 .018 25 .045 .064 .087	60
55					.040 .014 27 .040 .055 .064	.052 .015 52 .052 .068 .079	.049 .010 32 .050 .037 .068	.048 .014 111 .049 .059 .076	55
50					.066 .021 9 .063 .074 .109		.052 .020 116 .049 .068 .104	.053 .020 125 .050 .069 .110	50
45		.060 .012 16 .061 .072 .081		.036 .016 10 .031 .053 .065	.047 .011 7 .045 .048 .069	.044 .014 32 .044 .055 .074	.048 .013 106 .049 .060 .077	.048 .014 171 .048 .060 .079	45
40					.045 .020 89 .042 .059 .095	.038 .011 2 .038 .045 .048	.051 .018 17 .049 .064 .086	.046 .020 108 .042 .060 .090	40
35		.056 .018 17 .056 .075 .086			.036 .014 15 .036 .049 .059			.046 .019 32 .038 .064 .083	35
30	.048 .029 7 .044 .079 .091	.045 .022 17 .044 .062 .090			.052 .014 21 .050 .068 .071			.049 .020 45 .050 .068 .093	30
25									25
20	.042 .016 17 .041 .053 .077	.038 .009 2 .038 .043 .046		.022 .010 3 .028 .029 .029		.045 .014 7 .049 .054 .064		.040 .016 29 .041 .053 .076	20
15									15
10	.026 .002 2 .026 .027 .028				.033 .009 8 .030 .041 .050			.032 .009 10 .027 .039 .050	10
5									5
0									0
5			.011 .005 4 .010 .016 .019			.073 1		.023 .025 5 .012 .038 .069	5
10									10
15						.018 .001 2 .018 .018 .018		.018 .001 2 .018 .018 .018	15
20									20
25									25
30									30
35			.044 1					.044 1	35
40		.044 .011 65 .043 .054 .066						.044 .011 65 .043 .054 .066	40
45S			.045 .015 7 .049 .056 .067	.038 1				.044 .015 8 .044 .053 .067	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
	LONGITUDE								

SEPTEMBER  
FL 210

[illegible]

CODE: MEAN ST. DEV. N  
50% 84% 98%

SEPTEMBER  
FL 230

	MEAN								LAT
70N									70N
65				.038 .007 8 .040 .044 .048				.038 .007 8 .038 .044 .048	65
60				.060 .009 2 .060 .065 .068	.051 .029 25 .047 .066 .129			.052 .028 27 .050 .068 .125	60
55					.043 .014 27 .042 .058 .066	.057 .016 52 .056 .070 .090	.051 .017 34 .051 .085 .082	.052 .017 113 .052 .067 .088	55
50				.040 1	.072 .018 9 .077 .082 .102		.056 .024 127 .053 .078 .116	.057 .024 137 .053 .081 .115	50
45		.068 .016 16 .063 .083 .100		.035 .017 10 .025 .053 .065	.059 .051 11 .048 .058 .185	.047 .018 34 .045 .057 .087	.051 .015 106 .053 .064 .084	.051 .021 177 .052 .065 .089	45
40				.044 .008 2 .044 .049 .052	.046 .025 98 .046 .064 .114	.055 .025 5 .049 .088 .091	.054 .022 17 .051 .070 .097	.048 .025 123 .047 .067 .108	40
35		.056 .019 20 .056 .075 .086		.019 .019 2 .019 .032 .037	.035 .015 19 .028 .054 .060			.044 .021 41 .042 .070 .089	35
30	.057 .036 9 .048 .096 .116	.049 .020 17 .043 .070 .093			.052 .017 21 .051 .068 .085			.052 .023 47 .048 .079 .101	30
25									25
20	.048 .020 17 .045 .058 .095	.023 1		.024 .011 4 .022 .034 .039		.049 .015 7 .049 .058 .075		.044 .020 29 .044 .058 .093	20
15	.031 .005 2 .031 .034 .036	.023 1						.028 .006 3 .026 .033 .036	15
10	.033 .002 2 .033 .034 .034				.039 .008 8 .038 .048 .051			.038 .008 10 .033 .048 .051	10
5									5
0	.006 1							.006 1	0
5			.011 .005 4 .012 .016 .016			.074 1		.023 .026 5 .018 .037 .069	5
10									10
15						.024 .011 2 .024 .031 .034		.024 .011 2 .024 .031 .034	15
20						.092 1		.092 1	20
25						.033 .002 2 .033 .034 .035		.033 .002 2 .033 .034 .035	25
30									30
35			.127 1					.127 1	35
40		.049 .013 65 .047 .060 .079						.049 .013 65 .047 .060 .079	40
45S			.048 .019 7 .054 .061 .074	.053 1				.049 .018 8 .050 .060 .074	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
	LONGITUDE								

MEAN LAT

70N										70N	
65					.045 .018 .8 .038 .065 .079					.045 .018 .8 .038 .065 .079	65
60						.051 .022 .25 .045 .070 .098				.051 .022 .25 .045 .070 .098	60
55						.043 .014 .27 .040 .061 .070	.060 .020 .52 .056 .079 .104	.052 .020 .33 .049 .066 .097		.054 .020 .112 .049 .070 .103	55
50						.069 .017 .9 .077 .082 .094		.059 .025 .127 .053 .081 .129		.060 .025 .136 .053 .082 .129	50
45	.079	1		.066 .014 .16 .060 .081 .093	.041 .020 .10 .037 .065 .078	.065 .048 .10 .056 .067 .180	.049 .017 .32 .047 .068 .082	.053 .016 .107 .056 .066 .085		.054 .021 .176 .052 .068 .093	45
40					.049	1	.052 .037 .95 .050 .067 .102	.054 .013 .10 .052 .060 .082	.055 .023 .18 .057 .070 .103	.052 .034 .124 .045 .067 .104	40
35				.055 .018 .18 .057 .073 .083		.036	1	.036 .015 .15 .030 .054 .060		.046 .019 .34 .037 .068 .081	35
30		.049 .030 .7 .049 .084 .095		.051 .019 .17 .048 .071 .086			.057 .017 .21 .055 .074 .085			.053 .020 .45 .052 .079 .089	30
25											25
20		.048 .020 .18 .046 .058 .098			.025 .012 .3 .028 .035 .038			.049 .016 .7 .055 .058 .074		.046 .020 .28 .040 .057 .097	20
15											15
10		.036 .002 .2 .036 .037 .038					.037 .007 .8 .037 .045 .048			.037 .006 .10 .035 .044 .047	10
5											5
0											0
5				.011 .006 .4 .011 .016 .018				.055	1	.020 .018 .5 .014 .031 .052	5
10											10
15								.020 .009 .2 .020 .026 .029		.020 .009 .2 .020 .026 .029	15
20				.028 .002 .2 .028 .029 .029						.028 .002 .2 .028 .029 .029	20
25								.060	1	.060	25
30											30
35			.099	1						.099	35
40			.051 .015 .65 .051 .067 .084							.051 .015 .65 .051 .067 .084	40
45S				.051 .020 .7 .055 .064 .078	.060	1				.052 .019 .8 .056 .063 .078	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

 SEPTEMBER  
 FL 270

	MEAN										LAT
70N											70N
65					.041 .008 8 .038 .050 .057					.041 .008 8 .038 .050 .057	65
60						.049 .019 25 .045 .072 .085				.049 .019 25 .045 .072 .085	60
55						.045 .016 27 .042 .061 .078	.066 .024 52 .060 .089 .131	.056 .023 33 .051 .069 .111		.056 .023 33 .051 .069 .111	55
50						.064 .016 8 .063 .083 .085		.062 .029 123 .053 .089 .147		.062 .029 123 .053 .089 .147	50
45	.049 .004 3 .047 .052 .054		.071 .019 18 .071 .081 .119		.042 .023 10 .038 .064 .084	.052 .015 8 .050 .061 .080	.051 .017 32 .051 .072 .082	.055 .019 109 .055 .070 .101		.054 .020 178 .050 .072 .098	45
40	.086 .010 2 .086 .092 .095				.043 .020 6 .042 .060 .076	.052 .031 94 .049 .067 .129	.060 .023 10 .053 .086 .103	.057 .024 16 .057 .072 .109		.054 .029 130 .047 .071 .122	40
35			.052 .017 19 .053 .069 .081		.049 .029 3 .046 .074 .085	.033 .015 17 .034 .049 .062				.044 .020 39 .042 .063 .085	35
30	.083 1	.047 .028 7 .049 .066 .095	.051 .017 17 .045 .068 .083			.057 .017 22 .058 .074 .084				.053 .020 47 .052 .075 .086	30
25					.016 .016 2 .016 .026 .030					.016 .016 2 .016 .026 .030	25
20		.049 .020 18 .048 .058 .099			.025 .011 8 .029 .034 .036		.051 .016 7 .053 .064 .074			.044 .020 33 .043 .059 .098	20
15		.035 .001 2 .035 .036 .036								.037 .004 3 .036 .041 .043	15
10		.059 .016 2 .059 .069 .073				.037 .006 8 .037 .044 .045				.042 .012 10 .038 .045 .069	10
5											5
0		0.000 1								0.000 1	0
5				.011 .006 4 .010 .016 .020			.060 1			.021 .020 5 .012 .034 .057	5
10											10
15							.018 .009 2 .018 .024 .027			.018 .009 2 .018 .024 .027	15
20				.012 1						.012 1	20
25											25
30			.033 1							.033 1	30
35											35
40			.056 .020 65 .056 .073 .092							.056 .020 65 .056 .073 .092	40
45S			.054 .019 7 .054 .068 .082	.068 1						.056 .018 8 .056 .068 .082	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

SEPTEMBER  
FL 290

															MEAN			LAT						
70N																								70N
65																								65
60																								60
55																								55
50																								50
45																								45
40																								40
35																								35
30																								30
25																								25
20																								20
15																								15
10																								10
5																								5
0																								0
5																								5
10																								10
15																								15
20																								20
25																								25
30																								30
35																								35
40																								40
45S																								45S
15E	60E	105E	150E	165W	120W	75W	30W	15E																
LONGITUDE																								

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SEPTEMBER  
FL 310

												MEAN			LAT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
70N																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SEPTEMBER  
FL 330

															MEAN			LAT
70N																	70N	
65																	65	
60																	60	
55																	55	
50																	50	
45																	45	
40																	40	
35																	35	
30																	30	
25																	25	
20																	20	
15																	15	
10																	10	
5																	5	
0																	0	
5																	5	
10																	10	
15																	15	
20																	20	
25																	25	
30																	30	
35																	35	
40																	40	
45S																	45S	
15E	60E	105E	150E	165W	120W	75W	30W	15E										
LONGITUDE																		



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

 SEPTEMBER  
 FL 350

MEAN																	LAT									
70N																	70N									
65										143	093	9			269	1	205	125	12		182	115	22	65		
										113	246	305					213	352	382		110	308	382			
60										199	104	4	155	097	58		153	148	9		157	106	71	60		
										225	288	308	136	260	339		059	359	380		127	269	365			
55										306	020	2	113	077	66	145	107	94		107	069	100	124	089	262	55
										306	319	324	077	207	300	109	265	403		082	159	312	085	213	341	
50										068	035	8	168	102	17	097	067	102		101	067	183	105	074	353	50
										055	117	127	146	304	361	077	231	332		077	165	305	076	178	319	
45	123	050	7	113	058	16	073	042	25	083	076	27	081	050	48	068	036	69	088	057	118	083	054	310	45	
	092	178	203	094	195	219	055	122	152	062	136	282	062	115	187	059	087	207	072	126	267	063	119	234		
40	085	031	14	042	011	8	130	061	7	068	062	32	065	042	133	062	031	12	071	047	18	068	047	224	40	
	085	117	138	047	048	057	128	204	217	050	078	279	055	100	184	050	093	125	062	102	185	054	105	216		
35	080	027	5	055	024	31	065	023	4	057	020	70	070	056	19							060	030	129	35	
	083	108	115	048	072	110	064	087	095	056	077	099	042	142	189							053	081	152		
30	031		1	049	025	11	054	022	18	056	007	5	038	020	27	063	024	21				050	024	83	30	
				045	064	104	052	075	103	054	064	064	038	061	073	065	089	103				049	072	108		
25				044	004	3	079		1	034	017	26	055		1							037	018	31	25	
				043	047	049				032	048	064										038	052	074		
20				058	026	19	060	024	2	023	013	13	060	003	2	048	016	7				046	026	43	20	
				052	076	123	060	075	082	025	034	048	060	061	062	045	058	078				044	065	108		
15				023	010	3	019	003	2	029	003	2	042	005	3							029	011	10	15	
				027	031	033	019	021	022	029	031	032	045	046	047							024	041	047		
10				045	015	5	014	001	2				039	009	11							038	014	18	10	
				042	062	063	014	015	015				038	047	057							035	050	063		
5				027	0	000	013	0	000	026	004	2										022	007	6	5	
				027	027	027	013	013	013	026	029	030										020	028	030		
0				022		1	016	000	2	031	006	2										023	008	5	0	
							016	016	016	031	035	037										022	029	036		
5				025		1	018	003	2	017	014	7	051	016	3							026	019	13	5	
							018	019	020	008	036	038	043	064	073							021	038	067		
10				032	004	2	020	001	4	014	012	7	051	007	5							028	018	18	10	
				032	034	035	020	021	021	008	028	035	050	058	060							019	050	059		
15				029	002	2	022		1	004	003	6	041	011	4							020	017	13	15	
				029	030	030				005	007	007	042	051	052							022	035	052		
20				079	006	2	022	0	000	014	011	5	055		1							033	027	10	20	
				079	083	085	022	022	022	009	026	029										017	065	083		
25							048	026	4	027	016	4										037	024	8	25	
							048	073	076	027	039	049										024	068	075		
30							072	046	5	034		1										066	044	6	30	
							063	113	144													048	103	143		
35							119	035	6													119	033	6	35	
							115	158	172													115	158	172		
40							174	107	66													174	107	66	40	
							140	281	356													140	281	356		
45S							128	063	7	357		1										157	096	8	45S	
							107	177	232													134	232	341		
15E	60E	105E	150E	165W	120W	75W	30W	15E																		
LONGITUDE																										

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SEPTEMBER  
FL 370

[illegible]

MEAN	ST. DEV.	N
50%	84%	98%

[illegible][illegible]

	MEAN	LAT
1960-1970	18.0	18.0
1971-1980	18.5	18.5
1981-1990	19.0	19.0
1991-2000	19.5	19.5
2001-2010	20.0	20.0
2011-2020	20.5	20.5
2021-2030	21.0	21.0
2031-2040	21.5	21.5
2041-2050	22.0	22.0
2051-2060	22.5	22.5
2061-2070	23.0	23.0
2071-2080	23.5	23.5
2081-2090	24.0	24.0
2091-2100	24.5	24.5

[illegible]



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SEPTEMBER  
FL 450

												MEAN			LAT						
70N																					70N
65																					65
60																					60
55																					55
50																					50
45																					45
40																					40
35																					35
30																					30
25																					25
20																					20
15																					15
10																					10
5																					5
0																					0
5																					5
10																					10
15																					15
20																					20
25																					25
30																					30
35																					35
40																					40
45S																					45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E												
	LONGITUDE																				

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SEPTEMBER  
FL 470

												MEAN			LAT					
70N																70N				
65						.564	.170	.8							.564	.170	.8	65		
						.588	.709	.818							.588	.709	.818			
60									.494	.231	.26				.494	.231	.26	60		
									.501	.684	.987				.501	.684	.987			
55									.318	.127	.27	.496	.195	.52	.428	.134	.31	55		
									.284	.460	.537	.473	.717	.828	.454	.543	.639			
50									.397	.153	.9				.309	.132	.116	50		
									.436	.528	.539				.303	.432	.637			
45				.303	.153	.16		.276	.107	.10	.447	.202	.7	.218	.113	.32	.275	.126	.106	45
				.302	.397	.626		.255	.375	.468	.369	.632	.745	.178	.311	.477	.240	.406	.568	
40											.165	.086	.89				.183	.083	.17	40
											.146	.259	.352				.178	.233	.351	
35				.126	.086	.16					.088	.043	.14							35
				.120	.184	.269					.081	.129	.170				.073	.158	.242	
30			.075	.042	.7	.090	.037	.16			.095	.042	.21				.090	.041	.44	30
			.081	.107	.133	.078	.121	.169			.086	.148	.175				.064	.129	.173	
25																				25
20			.110	.045	.17			.031	.020	.3				.104	.038	.7	.100	.048	.27	20
			.103	.133	.185			.031	.047	.054				.116	.144	.152	.101	.153	.184	
15																				15
10			.117	.005	.2						.072	.011	.8				.081	.021	.10	10
			.117	.120	.122						.072	.087	.089				.076	.101	.120	
5																				5
0																				0
5							.014	.006	.4					.082		.1	.028	.028	.5	5
							.013	.019	.023								.014	.045	.077	
10																				10
15														.055	.013	.2	.055	.013	.2	15
														.055	.063	.067	.055	.063	.067	
20																				20
25																				25
30																				30
35																				35
40				.400	.223	.65											.400	.223	.65	40
				.356	.595	.856											.356	.595	.856	
45S							.362	.063	.5	.384	.1						.366	.058	.6	45S
							.313	.435	.451								.349	.431	.450	
15E	60E	105E	150E	165W	120W	75W	30W	15E												
LONGITUDE																				

[illegible]



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SEPTEMBER  
FL 510

									MEAN	LAT
70N										70N
65				.887 .257 8 .815 1.241 1.281					.887 .257 8 .815 1.241 1.281	65
60					.731 .288 26 .759 .952 1.391				.731 .288 26 .759 .952 1.391	60
55					.557 .200 27 .556 .689 .987	.740 .225 52 .684 1.036 1.168		.661 .162 31 .659 .808 .943	.673 .216 110 .604 .918 1.107	55
50					.552 .219 9 .615 .711 .842			.522 .167 116 .513 .692 .908	.524 .171 125 .517 .698 .902	50
45		.443 .197 16 .419 .579 .884		.569 .303 10 .508 .917 1.085	.507 .183 7 .569 .674 .741	.450 .340 32 .357 .564 1.420		.463 .151 104 .468 .620 .762	.467 .217 169 .440 .635 1.012	45
40					.292 .138 89 .254 .440 .638			.320 .118 17 .330 .421 .521	.297 .135 106 .244 .439 .624	40
35		.197 .115 16 .179 .273 .471			.166 .066 14 .145 .220 .294				.183 .097 30 .124 .258 .424	35
30	.096 .038 7 .102 .129 .150	.133 .046 16 .126 .181 .219			.175 .079 21 .172 .232 .356				.147 .070 44 .108 .204 .334	30
25										25
20	.151 .065 17 .163 .220 .256			.075 .032 3 .077 .102 .113		.148 .039 7 .159 .177 .205			.142 .061 27 .153 .205 .250	20
15										15
10	.152 .009 2 .152 .157 .160				.088 .029 8 .091 .116 .127				.100 .037 10 .098 .137 .157	10
5										5
0										0
5			.042 .009 4 .039 .049 .056			.079 1			.049 .017 5 .041 .065 .077	5
10										10
15						.097 .005 2 .097 .100 .101			.097 .005 2 .097 .100 .101	15
20										20
25										25
30										30
35										35
40		.602 .228 65 .612 .847 .990							.602 .228 65 .612 .847 .990	40
45S			.540 .160 5 .579 .668 .771	.586 1					.548 .147 6 .583 .639 .768	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E	

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SEPTEMBER  
FL 530

										MEAN			LAT
70N													65
65													60
60													55
55													50
50													45
45													40
40													35
35													30
30													25
25													20
20													15
15													10
10													5
5													0
0													5
5													10
10													15
15													20
20													25
25													30
30													35
35													40
40													45S
45S													
15E	60E	105E	150E	165W	120W	75W	30W	15E					

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SEPTEMBER  
FL 550

	MEAN								LAT
70N									70N
65				1.486 .219 8 1.490 1.671 1.817				1.486 .219 8 1.490 1.671 1.817	65
60					1.180 .330 26 1.161 1.420 1.983			1.180 .330 26 1.161 1.420 1.983	60
55					.851 .238 27 .785 1.038 1.363	1.179 .277 52 1.149 1.474 1.719	1.053 .206 31 1.087 1.273 1.410	1.063 .282 110 1.026 1.354 1.661	55
50					.893 .266 9 .933 1.110 1.167		.865 .213 116 .845 1.103 1.284	.867 .217 125 .865 1.106 1.280	50
45		.679 .216 16 .729 .857 .995		.890 .307 10 .861 1.242 1.359	.837 .296 7 .755 1.205 1.238	.706 .259 32 .717 .863 1.320	.771 .176 104 .762 .951 1.158	.760 .219 169 .755 .958 1.231	45
40					.544 .189 89 .503 .717 1.021		.512 .119 17 .513 .609 .742	.539 .180 106 .490 .704 1.009	40
35		.377 .161 16 .379 .560 .652			.363 .106 14 .362 .457 .545			.370 .138 30 .286 .536 .635	35
30	.129 .032 7 .138 .154 179	.273 .095 16 .265 .367 .453			.374 .130 21 .350 .451 .711			.298 .138 44 .228 .411 .542	30
25									25
20	.265 .095 17 .261 .369 .391			.227 .015 3 .235 .238 .240		.287 .070 7 .265 .298 .431		.266 .086 27 .255 .361 .420	20
15									15
10	.243 .023 2 .243 .259 .265				.179 .064 8 .166 .269 .279			.192 .064 10 .185 .273 .279	10
5									5
0									0
5			.156 .033 4 .170 .178 .182			.172 1		.159 .030 5 .172 .177 .182	5
10									10
15						.230 .065 2 .230 .274 .292		.230 .065 2 .230 .274 .292	15
20									20
25									25
30									30
35									35
40		.992 .333 65 .891 1.330 1.624						.992 .333 65 .891 1.330 1.624	40
45S			.978 .078 5 1.006 1.045 1.062	1.062 1				.992 .078 6 1.021 1.062 1.064	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
	LONGITUDE								

		MEAN								LAT	
70N											70N
65					1.726 .167 8 1.742 1.861 1.981					1.726 .167 8 1.742 1.861 1.981	65
60						1.484 .359 26 1.401 1.840 2.279				1.484 .359 26 1.401 1.840 2.279	60
55						1.059 .215 27 1.979 1.291 1.502	1.438 .275 51 1.431 1.762 1.890	1.278 .208 31 1.293 1.470 1.684		1.299 .288 109 1.293 1.600 1.873	55
50						1.144 .333 9 1.212 1.412 1.503		1.069 .255 116 1.046 1.325 1.609		1.075 .262 125 1.070 1.336 1.607	50
45			870 .233 16 850 1.079 1.290		1.163 .364 10 1.061 1.577 1.824	1.149 .274 7 1.168 1.427 1.542	907 .248 32 929 1.123 1.426	980 .178 104 979 1.177 1.374		.974 .229 169 960 1.175 1.519	45
40						.738 .205 69 1.721 1.923 1.291		.678 .155 17 1.657 .830 .956		.729 .199 106 1.695 .910 1.278	40
35			.568 .218 16 583 .770 .993			.592 .194 14 1.547 .814 .968				.579 .207 30 1.434 .785 1.040	35
30		.193 .037 7 187 .220 .258	.460 .152 16 435 .620 .769			.567 .159 21 1.558 .642 .981				.468 .194 44 1.339 .634 .856	30
25											25
20		.406 .131 17 460 .533 .583			.390 .041 3 1.376 .424 .443		.397 .073 7 1.412 .477 .487			.402 .112 27 1.412 .516 .579	20
15											15
10		.372 .039 2 372 .398 .409				.296 .075 8 1.291 .377 .395				.311 .076 10 1.291 .390 .409	10
5											5
0											0
5				.341 .103 4 1.392 .406 .417			.238 1			.320 .101 5 1.389 .403 .416	5
10											10
15						.390 .166 2 1.390 .502 .548				.390 .166 2 1.390 .502 .548	15
20											20
25											25
30											30
35											35
40			1.259 .269 65 1.302 1.522 1.764							1.259 .269 65 1.302 1.522 1.764	40
45S				1.279 .048 5 1.282 1.317 1.335	1.420 1					1.303 .068 6 1.294 1.354 1.412	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		

MEAN	ST. DEV.	N
50%	84%	98%

SEPTEMBER  
FL 590

MEAN											LAT
70N											70N
65					2 006 148 8 2 016 2 160 2 207					2 006 148 8 2 016 2 160 2 207	65
60						1 795 391 26 1 770 2 135 2 659				1 795 391 26 1 770 2 135 2 659	60
55						1 333 238 27 1 260 1 611 1 776	1 774 280 51 1 783 2 032 2 388	1 564 263 31 1 562 1 931 2 094		1 605 320 109 1 639 1 904 2 259	55
50						1 428 399 9 1 539 1 698 1 842		1 301 283 116 1 301 1 644 1 825		1 310 295 125 1 305 1 646 1 846	50
45			1 088 234 16 1 113 1 238 1 556		1 331 303 10 1 276 1 685 1 829	1 272 266 7 1 280 1 457 1 648	1 190 283 32 1 161 1 484 1 733	1 220 195 104 1 194 1 426 1 604		1 210 234 159 1 191 1 439 1 689	45
40						983 241 89 955 1 158 1 629		896 203 17 898 1 017 1 357		969 238 106 931 1 155 1 574	40
35			873 286 16 844 1 123 1 478			829 229 14 787 1 100 1 229				852 262 30 680 1 124 1 435	35
30		318 076 7 337 393 424	686 137 16 684 806 936			798 134 21 788 902 1 056				681 209 44 617 870 1 018	30
25											25
20		589 151 17 621 724 822			572 100 3 512 649 705		539 107 7 515 618 688			574 138 27 598 707 816	20
15											15
10		598 021 2 598 611 617				436 136 8 456 593 605				468 138 10 520 600 616	10
5											5
0											0
5				557 146 4 634 654 656			377 1			521 149 5 615 653 656	5
10											10
15							605 150 2 605 706 748			605 150 2 605 706 748	15
20											20
25											25
30											30
35											35
40			1 594 318 65 1 594 1 901 2 205							1 594 318 65 1 594 1 901 2 205	40
45S				1 501 067 5 1 486 1 562 1 598	1 763 1					1 544 115 6 1 513 1 635 1 747	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

OCTOBER  
FL 190

												MEAN			LAT	
70N																70N
65						.046 .017 7 .042 .069 .074								.046 .017 7 .042 .069 .074		65
60								.041 .014 42 .043 .051 .065						.041 .014 42 .042 .051 .065		60
55								.044 .012 38 .045 .052 .068	.044 .013 61 .044 .057 .069	.046 .010 22 .045 .056 .063			.044 .012 121 .044 .056 .068		55	
50											.047 .019 103 .044 .062 .096		.047 .019 103 .044 .062 .096		50	
45			.050 .009 22 .050 .060 .067		.027 .010 10 .026 .038 .045	.033 .016 5 .027 .043 .062	.042 .020 44 .040 .061 .084	.041 .011 117 .042 .050 .072			.042 .014 198 .040 .052 .073		.042 .014 198 .040 .052 .073		45	
40					.046 1	.044 .020 98 .042 .056 .090	.036 1	.040 .014 19 .042 .050 .063			.043 .019 119 .042 .055 .089		.043 .019 119 .042 .055 .089		40	
35			.058 .019 27 .054 .069 108		.039 .015 2 .039 .049 .053	.026 .010 17 .024 .037 .047					.045 .022 46 .048 .061 .088		.045 .022 46 .048 .061 .088		35	
30		.039 .009 5 .036 .048 .052	.043 .014 19 .047 .054 .067			.043 .016 32 .044 .055 .077					.043 .015 56 .037 .054 .070		.043 .015 56 .037 .054 .070		30	
25	.077 1										.077 1		.077 1		25	
20		.048 .013 19 .047 .059 .073			.026 1		.030 .009 10 .035 .037 .040				.041 .015 30 .038 .058 .069		.041 .015 30 .038 .058 .069		20	
15															15	
10		.030 1				.028 .014 9 .024 .044 .049					.029 .013 10 .025 .043 .049		.029 .013 10 .025 .043 .049		10	
5															5	
0															0	
5				.016 .003 2 .016 .018 .019			.067 .007 3 .070 .073 .074				.046 .026 5 .057 .071 .074		.046 .026 5 .057 .071 .074		5	
10															10	
15															15	
20															20	
25															25	
30															30	
35				.052 1							.052 1		.052 1		35	
40			.044 .011 77 .044 .057 .069								.044 .011 77 .044 .057 .069		.044 .011 77 .044 .057 .069		40	
45S				.040 .006 2 .040 .044 .046							.040 .006 2 .040 .044 .046		.040 .006 2 .040 .044 .046		45S	
15E 60E 105E 150E 165W 120W 75W 30W 15E																
LONGITUDE																

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

OCTOBER  
FL 210

	MEAN								LAT
70N									70N
65					.046 .015 7 .042 .063 .067				65
60						.043 .016 42 .043 .055 .079			60
55						.044 .014 38 .045 .054 .065	.048 .018 61 .049 .060 .088	.047 .010 22 .045 .059 .064	55
50								.049 .019 114 .045 .065 .096	50
45			.053 .010 22 .053 .062 .074		.027 .008 10 .028 .036 .040	.033 .016 5 .027 .043 .061	.039 .020 45 .037 .053 .080	.042 .013 116 .043 .051 .079	45
40					.022 .013 5 .020 .036 .037	.043 .022 110 .041 .063 .093	.053 .015 9 .056 .067 .077	.042 .013 19 .043 .050 .070	40
35			.054 .020 33 .050 .064 .102		.038 .014 2 .038 .047 .050	.031 .029 30 .024 .041 .113			35
30		.038 .008 5 .035 .045 .052	.046 .016 19 .046 .057 .076			.041 .012 32 .044 .050 .065			30
25									25
20		.050 .013 19 .048 .061 .075	.004 1		.010 .010 9 .005 .019 .028		.033 .012 10 .036 .041 .051	.035 .020 39 .038 .056 .069	20
15									15
10		.030 1				.031 .016 9 .026 .051 .054			10
5									5
0		.022 1						.022 1	0
5				.016 .003 2 .016 .018 .019			.061 .009 3 .061 .068 .071	.043 .023 5 .050 .065 .070	5
10									10
15									15
20									20
25									25
30									30
35			.040 1	.063 .028 2 .063 .081 .089				.055 .025 3 .040 .074 .088	35
40			.047 .011 76 .046 .058 .070	.044 1				.047 .011 77 .045 .058 .070	40
45S				.043 .005 2 .043 .046 .048				.043 .005 2 .043 .046 .048	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
	LONGITUDE								

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

OCTOBER  
FL 230

													MEAN			LAT																
70N																							70N									
65										.046 .042	.018 .064	7 .076									.046 .042	.018 .064	7 .076	65								
60										.046 .046	.022 .059	42 .113									.046 .046	.022 .059	42 .113	60								
55										.045 .046	.016 .057	.38 .080		.052 .049	.024 .067	.61 .103		.048 .047	.012 .060	.22 .071		.049 .048	.020 .065	121 .099	55							
50																		.049 .044	.020 .067	.114 .103		.049 .044	.020 .067	114 .103	50							
45					.056 .057	.011 .065	22 .079			.026 .027	.009 .036	10 .037	.050 .051	.019 .069	10 .074	.042 .040	.025 .054	.51 .113	.043 .041	.016 .051	116 .090		.044 .042	.019 .058	209 .091	45						
40										.038		1	.043 .042	.019 .058	108 .078	.046 .047	.004 .051	.8 .051	.044 .044	.016 .057	.19 .077		.043 .040	.018 .057	136 .079	40						
35	.041	1			.056 .053	.020 .067	31 .103			.055 .055	.013 .064	2 .067	.028 .025	.015 .036	22 .071							.044 .046	.022 .062	56 .083	35							
30			.038 .037	.010 .047	5 .053	.046 .046	.016 .060	19 .076							.042 .043	.012 .052	.33 .065					.043 .043	.014 .055	57 .072	30							
25	.066	1																				.066		1	25							
20			.052 .052	.013 .064	19 .076					.024 .012	.026 .045	3 .059				.036 .037	.011 .043	10 .057				.044 .042	.017 .061	32 .073	20							
15			.040		1																	.040		1	15							
10			.031		1								.033 .029	.019 .052	9 .064							.033 .029	.018 .050	10 .064	10							
5																									5							
0																									0							
5							.016 .016	.003 .018	2 .019							.058 .052	.010 .066	3 .071				.041 .050	.022 .059	5 .070	5							
10																									10							
15																									15							
20																									20							
25																									25							
30																									30							
35	.053	1			.065		1	.057	1													.058 .057	.005 .062	3 .065	35							
40					.048 .048	.013 .062	.77 .074	.044	1													.048 .048	.013 .061	.78 .074	40							
45S								.045 .045	.005 .048	2 .050												.045 .045	.005 .048	2 .050	45S							
																							15E	60E	105E	150E	165W	120W	75W	30W	15E	
																							LONGITUDE									



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

OCTOBER  
FL 250

	MEAN										LAT
70N											70N
65					.045 .018 7 .047 .058 .076					.045 .018 7 .047 .058 .076	65
60						.049 .024 41 .046 .061 .105				.049 .024 41 .046 .061 .105	60
55						.046 .019 38 .047 .058 .084	.058 .034 61 .049 .074 146	.049 .013 23 .050 .062 .077		.052 .027 122 .042 .069 .128	55
50					.024 1			.051 .021 109 .047 .068 .123		.051 .021 110 .047 .068 .122	50
45			.060 .014 22 .062 .072 .099		.027 .010 10 .028 .037 .044	.045 .015 10 .043 .054 .075	.043 .029 44 .043 .051 .090	.046 .020 116 .042 .056 .110		.046 .022 202 .039 .060 .098	45
40					.039 .005 7 .039 .044 .046	.044 .022 104 .042 .057 .104	.051 .023 2 .051 .066 .072	.044 .020 19 .043 .061 .082		.044 .021 132 .040 .058 .103	40
35	.049 1		.056 .022 30 .053 .068 .105		.060 .004 3 .058 .063 .065	.027 .014 22 .025 .045 .054				.045 .023 56 .046 .064 .084	35
30		.039 .009 5 .038 .049 .053	.047 .017 19 .046 .061 .079			.043 .012 33 .043 .051 .069				.044 .014 57 .044 .053 .071	30
25											25
20		.052 .014 19 .050 .066 .078	.064 1		.041 .017 4 .046 .052 .056		.038 .011 10 .041 .047 .054			.047 .015 34 .044 .061 .076	20
15		.021 .003 2 .021 .022 .023								.021 .003 2 .021 .022 .023	15
10		.031 1				.032 .017 9 .031 .050 .058				.032 .016 10 .029 .048 .058	10
5											5
0											0
5				.017 .003 2 .017 .018 .019			.055 .008 3 .051 .061 .065			.040 .020 5 .048 .056 .065	5
10											10
15											15
20				.048 1						.048 1	20
25											25
30											30
35			.034 .004 2 .034 .036 .037	.061 1						.043 .013 3 .037 .053 .060	35
40			.051 .015 77 .049 .066 .085							.051 .015 77 .049 .066 .085	40
45S				.047 .004 2 .047 .050 .051						.047 .004 2 .047 .050 .051	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

OCTOBER  
FL 270

												MEAN			LAT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
70N																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

OCTOBER  
FL 290

										MEAN			LAT											
70N														70N										
65						.069 .072	.025 .097	7 .105					.069 .072	.025 .097	7 .105	65								
60									.062 .050	.040 .089	41 .168			.062 .050	.040 .089	41 .168	60							
55									.055 .045	.040 .067	37 .184	.081 .050	.063 .150	61 .235	.063 .054	.037 .080	28 .177	.069 .048	.053 .098	126 .229	55			
50						.027		1	.079		1				.057 .051	.028 .079	118 .133	.057 .051	.028 .079	120 .133	50			
45	.044 .047	.008 .050	3 .052		.072 .066	.022 .095	22 .121		.036 .030	.016 .050	11 .066	.046 .040	.022 .065	8 .085	.051 .044	.027 .074	50 .124	.052 .044	.033 .068	120 .171	.052 .039	.030 .073	214 .149	45
40	.060 .066	.016 .073	6 .078						.071 .045	.055 .094	6 .160	.047 .040	.030 .063	104 .150	.060 .055	.024 .075	5 .101	.048 .041	.028 .077	19 .108	.049 .039	.031 .070	140 .156	40
35	.047 .045	.015 .058	4 .068		.059 .053	.025 .076	32 .131		.030 .032	.002 .032	3 .032	.029 .024	.015 .037	23 .067							.046 .042	.025 .064	62 .122	35
30	.043 .043	.004 .046	3 .047	.040 .044	.014 .053	9 .058	.048 .051	.017 .054	19 .087			.092		1	.047 .044	.019 .068	32 .093				.047 .036	.018 .059	64 .093	30
25	.060 .060	.003 .061	2 .062						.033 .033	.003 .035	3 .036										.043 .036	.013 .059	5 .062	25
20				.053 .049	.017 .073	19 .085	.041		1	.031 .029	.020 .040	9 .071			.040 .039	.013 .047	10 .065				.044 .043	.019 .066	39 .083	20
15									.012		2	.012 .012	.002 .013	.013							.012 .012	.001 .013	3 .013	15
10				.033		1	.022		1						.034 .031	.016 .053	9 .058				.033 .031	.015 .050	11 .058	10
5																								5
0					.023		1														.023		1	0
5								.018 .018	.002 .019	2 .019					.052 .052	.004 .055	3 .057				.038 .046	.017 .054	5 .057	5
10																								10
15																								15
20																								20
25																								25
30					.095 .095	.042 .124	2 .135	.059 .059	.013 .068	2 .071											.077 .063	.036 .106	4 .133	30
35								.052 .061	.020 .067	3 .070											.052 .061	.020 .067	3 .070	35
40					.067 .056	.041 .083	76 .169														.067 .056	.041 .083	76 .169	40
45S							.096 .096	.041 .123	2 .134												.096 .096	.041 .123	2 .134	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E															
	LONGITUDE																							

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

OCTOBER  
FL 310

										MEAN	LAT
70N						.227 .003 2 .227 .228 .229	.173 .089 7 .231 .261 .261		.185 .081 9 .229 .255 .261	70N	
65					.098 .048 7 .089 .156 .181	.249 .029 3 .257 .272 .278	.057 .009 9 .053 .068 .072	.118 .050 5 .088 .170 .195	.106 .069 24 .072 .189 .259	65	
60						.077 .064 42 .057 .114 .260	.049 .000 3 .049 .049 .049	.081 .051 10 .059 .131 .186	.076 .061 55 .056 .113 .251	60	
55					.052 .019 5 .044 .061 .087	.064 .049 37 .047 .083 .203	.104 .079 66 .061 .200 .277	.070 .052 40 .054 .097 .249	.083 .067 148 .051 .164 .239	55	
50					.092 .053 2 .092 .127 .142	.206 .022 2 .206 .221 .227	.109 .019 2 .109 .122 .127	.063 .037 123 .051 .096 .183	.066 .041 129 .052 .099 .191	50	
45	.054 .003 3 .055 .056 .057		.081 .034 22 .070 .102 .169	.036 .008 2 .036 .041 .044	.049 .029 20 .042 .065 .120	.064 .040 19 .049 .088 .171	.056 .031 45 .046 .079 .146	.057 .039 117 .046 .076 .189	.059 .037 228 .032 .085 .176	45	
40	.086 .051 5 .063 .117 .176		.049 .002 2 .049 .050 .051	.045 .010 6 .042 .056 .061	.072 .050 10 .060 .079 .190	.055 .040 120 .045 .082 .186	.050 .020 7 .050 .055 .086	.050 .032 21 .045 .079 .128	.056 .040 171 .046 .081 .186	40	
35	.054 .014 3 .056 .066 .070		.066 .027 35 .057 .091 .131		.042 .026 10 .034 .060 .101	.028 .010 24 .030 .038 .048			.050 .028 72 .043 .069 .128	35	
30	.047 .009 5 .042 .058 .059	.046 .008 5 .047 .055 .055	.049 .019 19 .049 .060 .093	.083 .035 3 .061 .109 .129	.034 .027 8 .025 .037 .094	.048 .018 32 .047 .067 .087			.048 .021 72 .037 .061 .107	30	
25	.039 .009 4 .043 .046 .047			.044 .009 3 .042 .051 .054	.028 .011 5 .029 .036 .047				.036 .012 12 .030 .047 .053	25	
20		.054 .018 20 .050 .075 .089	.027 .004 3 .029 .030 .031		.036 .018 14 .038 .052 .069		.038 .011 10 .035 .050 .058		.043 .018 47 .042 .062 .083	20	
15		.040 .010 2 .040 .047 .050	.027 .014 6 .024 .038 .041		.015 .001 3 .014 .015 .016				.026 .014 11 .030 .039 .048	15	
10		.035 .002 2 .035 .036 .037	.042 .003 2 .042 .044 .045	.015 .001 2 .015 .016 .016	.010 1	.034 .021 9 .033 .052 .073			.031 .018 16 .020 .044 .070	10	
5				.014 .001 2 .014 .015 .015					.014 .001 2 .014 .015 .015	5	
0				.015 .007 3 .020 .021 .021					.015 .007 3 .020 .021 .021	0	
5				.020 .003 2 .020 .021 .022			.067 .018 3 .078 .081 .082		.048 .027 5 .041 .079 .082	5	
10										10	
15				.016 .016 2 .016 .027 .031					.016 .016 2 .016 .027 .031	15	
20			.080 .011 2 .080 .087 .091	.098 .025 2 .098 .115 .122					.089 .022 4 .080 .108 .121	20	
25			.105 .011 2 .105 .112 .116						.105 .011 2 .105 .112 .116	25	
30			.080 .024 5 .090 .101 .103						.080 .024 5 .090 .101 .103	30	
35	.028 1		.074 .025 3 .076 .095 .103	.070 .057 10 .059 .074 .203					.068 .051 14 .059 .080 .197	35	
40			.081 .062 76 .059 .105 .258	.064 1					.081 .061 77 .059 .103 .257	40	
45S				.155 .093 2 .155 .217 .243					.155 .093 2 .155 .217 .243	45S	
15E 60E 105E 150E 165W 120W 75W 30W 15E											

LONGITUDE

CODE: MEAN ST. DEV. N  
50% 84% 98%

OCTOBER  
FL 330

															MEAN					LAT										
70N												.325	1	.152	.101	.12				.165	.107	.13	70N							
														.111	.283	.305				.130	.292	.321								
65												.176	.104	.7	.161	.127	.12	.135	.108	.20	.113	.086	.14	.141	.109	.53	65			
												.123	.239	.364	.062	.314	.337	.055	.275	.327	.067	.247	.265	.070	.279	.340				
60															.113	.087	.57	.284	.029	.14	.141	.096	.17	.145	.103	.88	60			
												.083	.194	.326	.083	.194	.326	.289	.313	.321	.088	.273	.308	.077	.284	.325				
55									.121	.037	.4	.236	.077	.4	.081	.061	.45	.142	.097	.80	.089	.066	.62	.113	.085	.195	55			
									.118	.157	.168	.289	.289	.289	.059	.134	.241	.126	.250	.328	.061	.179	.254	.072	.214	.295				
50									.089	.053	.7	.111	.086	.11	.123	.065	.7	.088	.046	.36	.075	.049	.130	.082	.054	.191	50			
									.062	.170	.190	.087	.178	.300	.124	.132	.246	.071	.127	.207	.059	.109	.224	.083	.127	.238				
45									.096	.047	.22	.071	.029	.7	.060	.053	.14	.090	.075	.10	.075	.041	.78	.064	.049	.119	.072	.049	45	
									.078	.132	.215	.050	.103	.119	.043	.060	.199	.046	.151	.245	.061	.117	.188	.047	.097	.215	.046	.117	45	
40	.083	.049	.5						.080	.037	.6	.078	.033	.3	.045	.017	.9	.061	.044	.118	.074	.031	.11	.056	.041	.19	.062	.042	40	
	.059	.118	.170						.092	.111	.122	.066	.105	.121	.038	.068	.070	.051	.086	.206	.060	.096	.144	.052	.091	.148	.052	.088	40	
35	.057	.031	.9						.063	.027	.35				.051	.035	.27	.034	.029	.26							.051	.032	35	
	.055	.059	.126						.053	.082	.127				.043	.072	.145	.030	.043	.114							.045	.074	35	
30	.044	0	.000	.2	.049	.009	.6	.049	.021	.19					.041	.021	.18	.050	.021	.33							.047	.021	30	
	.044	.044	.044		.051	.055	.064	.046	.061	.099					.045	.061	.080	.046	.071	.101							.040	.065	30	
25	.064		1	.066			1				.034	.001	.3		.039	.029	.20										.041	.027	25	
											.034	.035	.036		.034	.051	.118										.034	.060	25	
20				.055	.020	.22		.048	.006	.2					.033	.023	.13				.034	.012	.10				.044	.022	20	
				.052	.073	.092		.048	.051	.053					.029	.044	.090				.032	.045	.055				.042	.064	20	
15				.026	.003	.3		.045		1																	.031	.009	15	
				.026	.028	.029																					.028	.037	15	
10				.038	.004	.2		.043		1								.036	.018	.9							.037	.016	10	
				.038	.041	.042												.037	.055	.060							.030	.052	10	
5				.025		1		.018	.005	.2																		.020	.005	5
								.018	.021	.022																		.022	.024	5
0								.016	.010	.4																		.016	.010	0
								.011	.022	.031																		.011	.022	0
5								.024	.017	.6	.020	.005	.7					.088	.022	.3							.034	.030	5	
								.019	.035	.054		.019	.026	.028				.084	.106	.116							.022	.061	5	
10								.031	.005	.7	.024	.007	.6														.028	.007	10	
								.031	.038	.038		.023	.028	.036													.027	.037	10	
15								.025	.016	.4	.026	.009	.4														.025	.013	15	
								.028	.037	.044		.022	.032	.040													.013	.040	15	
20				.068	.016	.2	.057	.027	.9	.028	.008	.4															.051	.026	20	
				.068	.078	.082	.059	.084	.097	.029	.037	.038															.041	.082	20	
25							.086	.030	.11	.093	.060	.10															.089	.047	25	
							.087	.099	.140	.079	.141	.217															.085	.103	25	
30							.069	.015	.5	.105	.050	.15															.096	.047	30	
							.071	.082	.085	.089	.142	.227															.084	.119	30	
35	.030		1				.062		1	.117	.096	.11															.106	.092	35	
										.089	.123	.358															.076	.111	35	
40							.114	.089	.76																		.114	.089	40	
							.082	.195	.406																		.082	.195	40	
45S										.211	.136	.2															.211	.136	45S	
										.211	.303	.342															.211	.303	45S	
	15E	60E	105E	150E	165W	120W	75W	30W	15E																					
	LONGITUDE																													

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

OCTOBER  
FL 350

											MEAN			LAT
70N							.329 .022 9 .327 .349 .368	.187 .089 18 .217 .280 .301	.279 .027 4 .269 .302 .320	.240 .095 31 .258 .327 .360	70N			
65							.232 .092 35 .239 .295 449	.266 .075 22 .285 .332 .350	.297 .057 10 .299 .347 .381	.291 .005 3 .289 .294 297	.254 .084 70 .181 .329 .393	65		
60						.291 .063 8 .291 .360 .380	.279 .078 9 .312 .331 .348	.163 .091 82 .163 .257 .335	.167 .065 14 .179 .228 .247	.112 .105 15 .058 .256 .311	.174 .100 128 .159 .279 .357	60		
55						.267 .063 17 .267 .333 .373	.218 .061 8 .225 .286 299	.110 .080 71 .079 .212 .276	.158 .109 76 .143 .283 .362	.097 .075 59 .064 .157 .292	.138 .100 231 .101 .255 .344	55		
50						.165 .116 9 .127 .292 351	.147 .070 4 .173 .205 209	.092 .079 23 .055 .186 257	.111 .072 48 .074 .195 269	.084 .057 144 .062 .139 249	.095 .069 228 .083 .162 279	50		
45	.054 .011 7 .052 .058 .075		.118 .063 23 .095 .174 .271	.103 .098 11 .062 .184 305	.094 .083 23 .054 .201 266	.089 .079 40 .057 .179 277	.093 .065 74 .069 .154 295	.075 .059 120 .049 .122 242	.087 .069 298 .057 .153 298			45		
40	.070 .032 14 .059 .112 131		.070 .019 6 .073 .080 .100	.107 .049 3 .141 .142 .143	.056 .037 26 .040 .091 137	.070 .058 163 .054 .102 274	.085 .018 5 .086 .105 .106	.060 .040 22 .053 .101 .145	.068 .053 239 .054 .103 255			40		
35	.057 .023 14 .056 .068 104		.067 .034 47 .054 .111 .130	.056 .012 4 .055 .068 072	.060 .031 48 .052 .089 150	.045 .036 28 .034 .064 .133		.083 .033 2 .083 .105 .114	.059 .033 143 .052 .089 150			35		
30	.062 .017 6 .056 .078 .091	.062 .023 9 .053 .087 .105	.049 .029 29 .040 .070 129	.053 .021 11 .056 .070 089	.049 .031 59 .042 .069 156	.055 .028 34 .049 .080 123		.049 .007 3 .046 .055 058	.052 .029 151 .045 .074 143			30		
25	.069 .020 5 .074 .088 .095	.059 .022 12 .051 .082 .097	.038 .013 10 .035 .051 .058	.039 .008 3 .038 .046 050	.040 .021 54 .036 .058 093			.052 .005 3 .053 .056 057	.044 .022 87 .041 .067 096			25		
20		.052 .021 32 .044 .071 .096	.051 .011 4 .050 .061 .065		.029 .020 34 .024 .044 .077		.035 .008 10 .036 .043 .045	.055 1	.040 .022 81 .037 .064 088			20		
15		.029 .006 8 .030 .035 .038	.041 .013 4 .044 .053 .056	.019 1	.014 .008 19 .016 .019 .030			.022 .013 32 .019 .033 .052				15		
10		.031 .008 7 .029 .035 .046	.028 .015 4 .022 .040 .052	.012 .009 4 .012 .020 .024	.013 .011 8 .014 .020 .034	.035 .016 9 .032 .051 .061		.025 .016 32 .022 .038 .057				10		
5		.032 1	.014 .001 2 .014 .015 .015	.013 .010 6 .014 .021 .028	.010 .002 2 .010 .011 .012			.014 .010 11 .013 .023 .031				5		
0			.013 .009 6 .017 .020 .021	.016 .011 7 .019 .026 .027	.012 .005 2 .012 .015 .017			.014 .010 15 .017 .023 .027				0		
5			.017 .018 6 .013 .030 .048	.022 .005 8 .021 .028 .031			.097 .020 3 .085 .112 .123	.034 .033 17 .025 .064 112				5		
10			.022 .018 5 .026 .037 .047	.019 .005 7 .018 .025 .026				.020 .012 12 .020 .027 .045				10		
15			.038 .029 5 .028 .061 .086	.027 .013 10 .025 .039 .048				.030 .021 15 .026 .044 .079				15		
20			.041 .028 7 .033 .063 .090	.042 .029 17 .036 .077 .094				.042 .029 24 .031 .074 .094				20		
25			.074 .030 7 .093 .097 .099	.083 .068 27 .070 .117 .248				.081 .062 34 .072 .116 237				25		
30			.173 .128 3 .086 .268 .342	.120 .080 22 .102 .194 .305				.127 .089 25 .099 .204 .355				30		
35	.042 1		.096 .088 9 .055 .173 .281	.123 .130 18 .070 .142 478				.112 .117 28 .067 .172 470				35		
40	.042 .013 3 .036 .052 .059		.167 .122 77 .124 .292 .507	.094 1				.162 .122 81 .119 .273 .501				40		
45S	.049 .010 3 .050 .057 .060			.230 .142 2 .230 .326 365					.121 .126 5 .060 .190 348			45S		
	15E	60E	105E	150E	165W	120W	75W	30W	15E					

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

OCTOBER  
FL 370

															MEAN			LAT		
70N																				70N
65																				65
60																				60
55																				55
50																				50
45																				45
40																				40
35																				35
30																				30
25																				25
20																				20
15																				15
10																				10
5																				5
0																				0
5																				5
10																				10
15																				15
20																				20
25																				25
30																				30
35																				35
40																				40
45S																				45S
15E	60E	105E	150E	165W	120W	75W	30W	15E												
LONGITUDE																				





CODE:

MEAN	ST. DEV.	N
50%	84%	98%

OCTOBER  
FL 410

	MEAN										LAT
70N											70N
65											
60											
55											
50											
45											
40											
35											
30											
25											
20											
15											
10											
5											
0											
5											
10											
15											
20											
25											
30											
35											
40											
45S											45S
15E	60E	105E	150E	165W	120W	75W	30W	15E			
LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

OCTOBER  
FL 430

		MEAN										LAT	
70N													70N
65													65
60													60
55													55
50													50
45													45
40													40
35													35
30													30
25													25
20													20
15													15
10													10
5													5
0													0
5													5
10													10
15													15
20													20
25													25
30													30
35													35
40													40
45S													45S
15E	60E	105E	150E	165W	120W	75W	30W	15E					

OCTOBER  
FL 450

225





	MEAN	LAT
1960-1970	18.0	18.0
1971-1980	18.5	18.5
1981-1990	19.0	19.0
1991-2000	19.5	19.5
2001-2010	20.0	20.0
2011-2020	20.5	20.5
2021-2030	21.0	21.0
2031-2040	21.5	21.5
2041-2050	22.0	22.0
2051-2060	22.5	22.5
2061-2070	23.0	23.0
2071-2080	23.5	23.5
2081-2090	24.0	24.0
2091-2100	24.5	24.5

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

OCTOBER  
FL 530

										MEAN			LAT			
70N													70N			
65					1.375	.471	7					1.375	.471	7	65	
					1.286	1.877	1.957					1.286	1.877	1.957		
60								1.000	.313	.42			1.000	.313	.42	60
								.985	1.284	1.788			.985	1.284	1.788	
55								.779	.350	.38		.952	.348	.60		55
								.733	1.110	1.471		.933	1.359	1.667		
50												.742	.266	.21		50
												.664	.219	.104		
45				.651	.284	.22						.664	.219	.104		45
				.655	.843	1.277						.646	.898	1.106		
40								.652	.431	.10		.583	.251	.42		40
								.634	1.208	1.241		.495	.856	1.115		
35												.555	.833	1.185		35
												.553	.206	.19		
30				.289	.186	.26						.554	.716	.991		30
				.226	.430	.842										
25								.283	.138	.17						25
								.244	.344	.635						
20				.188	.075	.5		.238	.113	.32						20
				.228	.252	.275		.236	.303	.516						
15																15
10				.141	.098	.19		.131		1		.125	.052	.10		10
				.129	.202	.372						.125	.173	.218		
5																5
0				.043		1										0
5								.096	.031	.9						5
								.079	.133	.139						
10																10
15																15
20																20
25																25
30																30
35																35
40																40
45S				.698	.256	.75										45S
				.655	.938	1.241										
								.977	.183	.2						
								.977	1.101	1.153						
	15E	60E	105E	150E	165W	120W	75W	30W	15E							
	LONGITUDE															

		MEAN										LAT
70N												70N
65					1.613 .478 7 1.603 2.101 2.152						1.613 .478 7 1.603 2.101 2.152	65
60						1.259 .375 42 1.212 1.514 2.235					1.259 .375 42 1.212 1.514 2.235	60
55						.926 .303 38 .908 1.237 1.477	1.201 .356 60 1.149 1.643 1.798	1.004 .284 21 .923 1.188 1.695		1.078 .352 119 1.040 1.473 1.780	55	
50								.876 .229 104 .853 1.085 1.409		.876 .229 104 .853 1.085 1.409	50	
45			.844 .353 22 .855 1.194 1.557		.933 .591 10 .894 1.576 1.923	1.076 .258 5 .950 1.325 1.490	.794 .250 42 .772 1.073 1.313	.781 .240 116 .739 1.014 1.411		.806 .291 195 .761 1.077 1.503	45	
40						.625 .233 97 .598 .780 1.293		.728 .230 19 .733 .906 1.207		.642 .235 116 .570 .786 1.260	40	
35			.385 .198 26 .290 .619 .888			.461 .193 17 .399 .544 .960				.415 .200 43 .374 .581 .912	35	
30		.224 .098 5 .232 .317 .359	.230 .107 19 .181 .332 .465			.339 .129 32 .327 .435 .665				.292 .131 56 .241 .401 .696	30	
25											25	
20		.190 .123 19 .168 .269 .480			.174 1		.216 .062 10 .209 .253 .342			.198 .105 30 .145 .252 .446	20	
15											15	
10		.044 1				.119 .033 9 .114 .152 .173				.111 .039 10 .110 .151 .173	10	
5											5	
0											0	
5				.179 .069 2 .179 .225 .244			.152 .014 3 .146 .163 .170			.163 .046 5 .146 .198 .241	5	
10											10	
15											15	
20											20	
25											25	
30											30	
35											35	
40			.863 .257 75 .854 1.202 1.327							.863 .257 75 .854 1.202 1.327	40	
45S				1.182 .247 2 1.182 1.349 1.418						1.182 .247 2 1.182 1.349 1.418	45S	
	15E	60E	105E	150E	165W	120W	75W	30W	15E			



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

OCTOBER  
FL 570

	MEAN								LAT
70N									70N
65				1.686 .363 7 1.720 2.018 2.082				1.686 .363 7 1.720 2.018 2.082	65
60					1.540 .371 41 1.505 1.774 2.438			1.540 .371 41 1.505 1.774 2.438	60
55					1.135 .301 38 1.134 1.476 1.613	1.414 .351 60 1.381 1.781 2.123	1.286 .304 21 1.307 1.453 2.055	1.302 .350 119 1.307 1.621 2.113	55
50							1.062 .251 104 1.060 1.263 1.585	1.062 .251 104 1.060 1.263 1.585	50
45		1.017 .370 22 .992 1.349 1.825		1.147 .524 10 1.227 1.658 1.980	1.121 .115 5 1.065 1.233 1.305	1.070 .283 42 1.005 1.356 1.665	.981 .241 116 1.060 1.218 1.514	1.017 .290 195 1.060 1.299 1.717	45
40					.834 .265 97 .767 1.065 1.576		.953 .248 19 .999 1.180 1.337	.853 .266 116 .756 1.093 1.512	40
35		.504 .185 26 .445 .710 910			.605 .234 17 .520 .829 1.110			.544 .211 43 .465 .789 1.054	35
30	.341 .154 5 .360 .490 .543	.369 .174 19 .305 .626 701			.512 .141 32 .489 .613 .850			.448 .171 56 .412 .614 .759	30
25									25
20	.295 .134 19 .293 .366 .628			.302 1		.346 .065 10 .323 .420 .468		.313 .115 30 .257 .390 .577	20
15									15
10	.151 1				.195 .041 9 .184 .237 273			.191 .041 10 .184 .227 272	10
5									5
0									0
5			.272 .109 2 .272 .345 .376			.221 .050 3 .202 .262 .286		.241 .083 5 .202 .322 .373	5
10									10
15									15
20									20
25									25
30									30
35									35
40		1.106 .291 75 1.081 1.323 1.983						1.106 .291 75 1.081 1.323 1.983	40
45S			1.471 .227 2 1.471 1.625 1.688					1.471 .227 2 1.471 1.625 1.688	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
LONGITUDE									

CODE :

MEAN	ST. DEV.	N
50%	84%	98%

OCTOBER  
FL 590

		MEAN										LAT	
70N													70N
65						1.856	.306	.7					65
60						1.966	2.124	2.194					60
55						1.646	.337	.41					55
50						1.764	2.116	2.679					50
45						1.357	.316	.38		1.666	.342	.60	45
40						1.329	1.627	2.045		1.554	2.046	2.367	40
35										1.537	.335	.21	35
30										1.553	1.731	2.328	30
25										1.545	.360	.119	25
20										1.503	1.683	2.351	20
15										1.270	.293	.104	15
10										1.266	1.522	1.880	10
5													5
0													0
5S													5S
10S													10S
15S													15S
20S													20S
25S													25S
30S													30S
35S													35S
40S													40S
45S													45S
75E	60E	105E	150E	165W	120W	75W	30W	15E					

LONGITUDE

MEAN	ST. DEV.	N
50%	84%	98%

NOVEMBER  
FL 190

										MEAN			LAT
70N													70N
65					.044 .017 8 .043 .063 .063						.044 .017 8 .043 .063 .063		65
60						.045 .016 34 .043 .055 .091					.045 .016 34 .043 .055 .091		60
55						.041 .011 35 .040 .051 .066	.037 .012 54 .040 .047 .058	.035 .013 29 .032 .047 .067			.038 .012 118 .036 .048 .061		55
50								.057 .105 125 .042 .061 .086			.057 .105 125 .042 .061 .086		50
45			.046 .009 24 .045 .054 .065		.024 .010 10 .020 .034 .043	.035 .016 13 .038 .053 .056	.046 .020 46 .049 .060 .083	.038 .009 147 .039 .047 .056			.040 .013 240 .039 .051 .069		45
40						.046 .019 90 .043 .061 .105	.041 1	.036 .010 19 .039 .041 .055			.044 .018 110 .039 .060 .100		40
35			.047 .009 28 .046 .059 .063			.028 .013 11 .023 .036 .057					.042 .013 39 .045 .056 .063		35
30	.041 .008 4 .043 .048 .051		.047 .013 17 .047 .061 .071			.042 .015 40 .042 .053 .069					.043 .014 61 .043 .053 .071		30
25													25
20	.040 .015 16 .037 .056 .067				.012 1			.032 .012 9 .031 .040 .055			.036 .015 26 .030 .053 .066		20
15													15
10	.043 1					.020 .011 11 .017 .025 .046					.022 .013 12 .018 .035 .048		10
5													5
0													0
5				.016 .005 2 .016 .019 .021				.051 1			.028 .017 3 .021 .041 .050		5
10													10
15				.030 1							.030 1		15
20													20
25													25
30													30
35			.002 1			.030 1					.016 .014 2 .016 .026 .029		35
40			.046 .015 60 .044 .057 .084					.031 1			.046 .015 61 .044 .057 .084		40
45S				.057 1		.026 1					.042 .016 2 .042 .052 .056		45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E				
LONGITUDE													

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

NOVEMBER  
FL 210

		MEAN								LAT	
70N											70N
65					.046 .015 .8 .049 .063 .065				.046 .015 .8 .049 .063 .065		65
60						.046 .017 .34 .044 .062 .088			.046 .017 .34 .044 .062 .088		60
55						.042 .011 .35 .041 .052 .067	.039 .013 .54 .042 .049 .065	.038 .013 .29 .035 .049 .070	.040 .012 .118 .038 .050 .071		55
50								.055 .069 .125 .042 .065 .229	.055 .069 .125 .042 .065 .229		50
45			.048 .010 .24 .047 .055 .070		.026 .009 .10 .023 .035 .039	.036 .015 .14 .039 .049 .061	.048 .018 .46 .049 .062 .088	.039 .009 .147 .039 .047 .058	.041 .013 .241 .040 .052 .072		45
40	.032 .015 .3 .034 .044 .048					.047 .022 .91 .043 .061 .119	.036 .012 .9 .031 .046 .061	.037 .012 .18 .039 .044 .059	.044 .021 .121 .041 .060 .103		40
35	.029 .018 .2 .029 .041 .046		.045 .011 .35 .044 .055 .066		.042 .1	.034 .013 .19 .037 .044 .057			.041 .013 .57 .042 .054 .066		35
30		.040 .010 .4 .044 .047 .048	.047 .015 .17 .046 .062 .076			.044 .019 .40 .041 .052 .079			.044 .017 .61 .043 .053 .078		30
25		.057 .1							.057 .1		25
20		.039 .014 .14 .035 .052 .069	.018 .014 .2 .018 .028 .031		.039 .018 .10 .035 .058 .073		.033 .012 .9 .032 .038 .058		.038 .016 .35 .032 .054 .074		20
15											15
10		.047 .1				.021 .013 .11 .020 .024 .051			.023 .014 .12 .020 .030 .055		10
5											5
0											0
5				.020 .006 .2 .020 .024 .026			.058 .1		.033 .019 .3 .026 .048 .057		5
10											10
15				.039 .1	.011 .1				.025 .014 .2 .025 .035 .038		15
20							.108 .1		.108 .1		20
25				.086 .1					.086 .1		25
30											30
35			.076 .1			.029 .1			.053 .024 .2 .053 .068 .075		35
40			.048 .015 .60 .045 .061 .085				.025 .1		.047 .015 .61 .045 .061 .084		40
45S				.066 .1		.026 .1			.046 .020 .2 .046 .060 .065		45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		

CODE: MEAN ST. DEV. N  
50% 84% 98%

NOVEMBER  
FL 230

	MEAN										LAT
70N											70N
65					.047 .015 8 .052 .062 .065					.047 .015 8 .052 .062 .065	65
60					.050 .021 34 .047 .060 .106					.050 .021 34 .047 .060 .106	60
55					.043 .012 35 .041 .053 .069		.042 .015 54 .043 .055 .074	.040 .013 31 .037 .051 .072		.042 .014 120 .039 .054 .074	55
50								.054 .062 126 .043 .068 .267		.054 .062 126 .043 .068 .267	50
45	.049 1		.049 .011 24 .050 .057 .075		.025 .015 10 .022 .033 .058	.039 .017 13 .040 .055 .068	.050 .021 46 .049 .054 .085	.039 .010 148 .038 .048 .059		.041 .015 242 .039 .054 .073	45
40	.017 .011 2 .017 .024 .028					.047 .022 94 .045 .062 .097	.042 .017 13 .038 .062 .071	.037 .013 19 .037 .046 .063		.045 .021 128 .041 .052 .091	40
35	.088 1		.048 .012 30 .046 .058 .071		.030 .008 2 .030 .035 .038	.023 .013 13 .023 .038 .045				.041 .018 46 .042 .057 .073	35
30		.038 .012 4 .045 .046 .046	.047 .016 17 .043 .065 .080			.043 .021 40 .041 .052 .083				.044 .020 61 .042 .053 .081	30
25	.039 .025 4 .044 .062 .067									.039 .025 4 .044 .062 .067	25
20		.041 .017 14 .039 .053 .077	.057 1		.016 1		.032 .011 9 .031 .043 .049			.037 .016 25 .035 .051 .074	20
15											15
10		.051 1				.022 .014 11 .021 .028 .054				.025 .015 12 .022 .036 .058	10
5											5
0											0
5				.024 .007 2 .024 .028 .030			.065 1			.037 .020 3 .030 .054 .064	5
10											10
15											15
20							.028 .012 4 .029 .038 .044			.028 .012 4 .029 .038 .044	20
25											25
30											30
35			.070 .070 2 .070 .118 .137	.047 .026 3 .045 .068 .078		.029 1				.052 .047 6 .031 .091 .134	35
40			.049 .016 60 .048 .064 .083				.038 1			.049 .016 61 .048 .063 .083	40
45S				.087 .012 2 .087 .094 .098		.027 1				.067 .030 3 .075 .091 .097	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

CODE:

MEAN

ST. DEV.

**N**

50%

84%

98%

NOVEMBER

FL 250

		MEAN											
70N												70N	
65					.048 .015 8 .046 .063 .071						.048 .015 8 .046 .063 .071	65	
60						.053 .023 34 .052 .071 .116					.053 .023 34 .052 .071 .116	60	
55						.044 .013 35 .042 .052 .075	.047 .021 54 .043 .060 .119	.044 .014 29 .042 .056 .074			.045 .017 118 .042 .058 .086	55	
50								.056 .071 124 .043 .070 .195			.056 .071 124 .042 .070 .185	50	
45	.031 .019 4 .036 .046 .047		.051 .013 24 .051 .059 .081		.034 .026 10 .027 .042 .094	.043 .033 13 .041 .055 .125	.057 .033 46 .052 .073 .148	.041 .013 151 .039 .052 .080			.045 .022 248 .040 .057 .104	45	
40	.041 .003 2 .041 .043 .044					.048 .023 92 .045 .066 .101	.082 .056 5 .043 .146 .157	.037 .014 20 .037 .050 .064			.047 .025 119 .042 .065 .125	40	
35	.077 .012 2 .077 .084 .088		.052 .013 30 .049 .068 .077			.027 .014 13 .025 .043 .051					.046 .019 45 .046 .066 .079	35	
30		.040 .013 4 .047 .048 .049	.048 .015 17 .046 .065 .076			.045 .026 40 .041 .053 .093					.045 .023 61 .044 .058 .076	30	
25												25	
20		.041 .018 14 .039 .054 .080	.050 1		.031 .015 5 .021 .047 .055		.032 .011 9 .033 .044 .048				.037 .016 29 .034 .049 .077	20	
15												15	
10		.055 1				.022 .010 11 .020 .025 .046					.025 .014 12 .021 .033 .054	10	
5		.009 1									.009 1	5	
0												0	
5				.025 .010 2 .025 .032 .035			.069 1				.040 .022 3 .035 .056 .068	5	
10												10	
15				.028 1							.028 1	15	
20							.040 1				.040 1	20	
25												25	
30												30	
35			.011 1	.068 1		.028 1					.036 .024 3 .028 .055 .068	35	
40			.053 .017 61 .051 .066 .092				.083 1				.053 .017 62 .051 .069 .092	40	
45S				.053 .025 2 .053 .070 .077		.028 1					.045 .024 3 .028 .062 .076	45S	
	15E	60E	105E	150E	165W	120W	75W	30W	15E				
LONGITUDE													

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

NOVEMBER  
FL 270

	MEAN										LAT
70N											70N
65					.053 .015 8 .053 .067 .077					.053 .015 8 .053 .067 .077	65
60						.063 .032 34 .055 .088 .139				.063 .032 34 .055 .088 .139	60
55						.048 .017 35 .046 .059 .089	.057 .030 54 .049 .077 .136		.048 .017 29 .045 .068 .081	.052 .024 118 .044 .071 .120	55
50									.060 .089 126 .045 .074 .131	.060 .089 126 .044 .074 .131	50
45	.018 1		.053 .013 24 .052 .062 .084		.033 .017 10 .027 .046 .070	.046 .035 13 .044 .055 .131	.063 .036 46 .057 .086 .152		.044 .020 148 .040 .055 .111	.048 .026 242 .041 .063 .135	45
40	.043 .041 2 .043 .071 .082					.052 .025 93 .046 .073 .106	.035 .019 9 .033 .048 .072	.037 .014 18 .037 .048 .065		.048 .024 122 .041 .071 .105	40
35			.056 .013 28 .056 .071 .080		.014 1	.029 .018 16 .029 .044 .068				.046 .021 45 .045 .070 .079	35
30		.044 .012 4 .050 .052 .052	.050 .018 17 .048 .068 .086			.043 .022 40 .042 .055 .085				.045 .021 61 .044 .061 .088	30
25	.044 .016 2 .044 .054 .058				.018 1					.035 .017 3 .028 .049 .058	25
20		.041 .018 14 .036 .054 .081	.022 1		.044 .024 5 .050 .066 .075		.033 .009 9 .030 .042 .047			.038 .018 29 .035 .052 .080	20
15											15
10		.059 1				.023 .010 11 .019 .028 .044				.026 .014 12 .022 .034 .057	10
5											5
0											0
5				.048 .008 2 .048 .053 .056			.070 1			.055 .012 3 .056 .056 .069	5
10											10
15			.040 1							.040 1	15
20											20
25											25
30											30
35			.040 .018 2 .040 .051 .056			.027 1				.035 .015 3 .027 .047 .056	35
40			.062 .037 62 .052 .074 .172				.020 1			.061 .037 63 .052 .074 .171	40
45S				.061 1		.028 1				.055 .027 2 .055 .073 .080	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

NOVEMBER  
FL 290

											MEAN			LAT			
70N																	70N
65																	65
60																	60
55																	55
50																	50
45																	45
40																	40
35																	35
30																	30
25																	25
20																	20
15																	15
10																	10
5																	5
0																	0
5																	5
10																	10
15																	15
20																	20
25																	25
30																	30
35																	35
40																	40
45S																	45S
15E	60E	105E	150E	165W	120W	75W	30W	15E									

LONGITUDE



CODE:

MEAN ST. DEV. N

50% 84% 98%

NOVEMBER

FL 310

	MEAN										LAT
70N											70N
65					.088	.054	8				65
60					.076	.105	.202				60
55						.105	.065	34	.218	.074	55
50						.087	.172	.245	.261	.269	50
45						.070	.057	35	.124	.080	45
40						.048	.116	.228	.102	.212	40
35					.024	.009	3		.112	.097	35
30					.024	.031	.034		.055	.221	30
25	.069	.023	4		.084	.046	24		.097	.075	25
20	.070	.091	.096		.069	.122	.200		.064	.187	20
15	.060	.029	8		.125		1		.058	.045	15
10	.048	.082	.118						.048	.080	10
5	.082	.034	7		.069	.026	31		.039	.027	5
0	.078	.098	.144		.065	.083	.131		.032	.070	0
5	.056	.012	3	.050	.013	4			.049	.022	5
10	.048	.064	.071	.056	.059	.059			.048	.062	10
15	.053	.011	3	.046		1					15
20	.049	.062	.067						.026	.007	20
25				.046	.019	17			.027	.033	25
30				.050	.057	.085			.062	.066	30
35				.031	.003	3			.037	.071	35
40				.031	.034	.035			.030	.017	40
45				.039	.022	4			.024	.050	45
50				.030	.054	.072			.015	.004	50
55				.029	.008	2			.016	.018	55
60				.029	.034	.037			.015	.003	60
65									.015	.018	65
70											70
75											75
80											80
85											85
90											90
95											95
100											100
105											105
110											110
115											115
120											120
125											125
130											130
135											135
140											140
145											145
150											150
155											155
160											160
165											165
170											170
175											175
180											180
185											185
190											190
195											195
200											200
205											205
210											210
215											215
220											220
225											225
230											230
235											235
240											240
245											245
250											250
255											255
260											260
265											265
270											270
275											275
280											280
285											285
290											290
295											295
300											300
305											305
310											310
315											315
320											320
325											325
330											330
335											335
340											340
345											345
350											350
355											355
360											360
365											365
370											370
375											375
380											380
385											385
390											390
395											395
400											400
405											405
410											410
415											415
420											420
425											425
430											430
435											435
440											440
445											445
450											450
455											455

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

NOVEMBER  
FL 330

																MEAN			LAT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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CODE:

MEAN	ST. DEV.	N
50%	84%	98%

 NOVEMBER  
 FL 350

	MEAN										LAT							
70N						249	.053	9	.268	.048	9	70N						
						255	.310	.320	.266	.321	.331							
65					.202	.084	.23	.247	.046	.10		65						
					213	.272	.352	.252	.293	.305								
60				.344	1	.188	.054	.4	.189	.096	.71	60						
						.208	.229	.235	.192	.278	.352							
55				.166	.071	.15	.216	.008	.152	.098	.67	55						
				.164	.259	.305	.219	.223	.140	.251	.360							
50				.124	.080	.18	.100	.076	.161	.084	.27	50						
				.110	.173	.315	.078	.124	.159	.241	.336							
45	.073	.080	9		.143	.082	.25	.130	.100	.18	.093	.095	.13	45				
	.050	.073	.261		.105	.243	.323	.094	.210	.346	.064	.109	.336					
40	.084	.038	.21		.119	.078	.12	.107	.074	.12	.089	.122	.6	40				
	.023	.124	.151		.080	.210	.260	.077	.164	.277	.040	.114	.329					
35	.088	.024	.11		.083	.037	.33	.029	.011	.5	.046	.035	.20	35				
	.086	.121	.125		.071	.115	.171	.027	.038	.047	.036	.038	.146					
30	.033	.012	.5	.056	.015	.4	.056	.024	.042	.022	.8	.042	.022	.28	30			
	.031	.041	.054	.063	.068	.069	.054	.080	.032	.060	.084	.036	.057	.102				
25	.058	.009	.2					.040	.010	.5	.037	.020	.29	.061	.043	.40	25	
	.058	.064	.067					.037	.045	.056	.031	.060	.078	.058	.078	.143		
20				.049	.021	.16	.021	1	.040	1	.065	.080	.10	.035	.068	.258	20	
				.046	.071	.090					.035	.058	.258	.036	.040	.044		
15											.032	.015	.4				15	
											.032	.047	.049					
10		.101	1						.059	.008	.2	.032	.014	.11			10	
									.059	.064	.066	.030	.043	.058				
5				.029	1				.033	.012	.3	.032	.043	.047			5	
												.024	.001	.2	.024	.024	.024	
0				.047	.018	.3	.021	.011	.024	.009	.3	.023	.003	.2	.023	.025	.026	0
				.035	.060	.071	.018	.033	.027	.031	.033	.023	.025	.026				
5				.053	.020	.5	.027	.012	.036	.026	.8	.036	.026	.3	.018	.035	.071	5
				.057	.069	.082	.026	.039	.046									
10				.058	.019	.4	.031	.015	.038	.028	.6	.013		1				10
				.053	.073	.087	.028	.048	.053									
15				.069	.022	.4	.040	.026	.052	1								15
				.060	.087	.104	.030	.060	.080									
20				.058	.012	.4	.022	.003										20
				.052	.066	.076	.022	.024	.025									
25				.086	.036	.4	.107	.007										25
				.088	.121	.129	.106	.113	.119									
30				.089	.018	.3	.083	.026										30
				.084	.104	.112	.075	.111	.124									
35							.095	.031	.9	.229	1							35
							.096	.122	.145									
40				.136	.103	.61						.439	1					40
				.104	.224	.354												
45S				.060	1	.124	1			.065	1							45S
15E	60E	105E	150E	165W	120W	75W	30W	15E										
LONGITUDE																		



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

NOVEMBER  
FL 390

	MEAN										LAT
70N											70N
65				.322 .106 .7	.274 .103 .81	.164 .026 .2				.275 .104 .90	65
60				.343 .119 .31	.355 .129 .40	.297 .125 .40				.331 .128 .111	60
55				.320 .122 .46	.322 .084 .13	.191 .115 .43	.262 .128 .59	.169 .103 .38	.246 .131 .199	.328 .466 .569	55
50				.315 .458 .500	.339 .384 .464	.170 .303 .482	.260 .402 .496	.161 .282 .371	.241 .386 .496		50
45	.336 .136 .6			.161 .081 .11	.239 .111 .21	.262 .093 .8	.147 .095 .12	.171 .128 .131	.180 .124 .183		45
40	.310 .503 .511			.124 .229 .336	.215 .347 .479	.241 .303 .456	.169 .230 .284	.147 .287 .468	.154 .288 .490		40
35				.187 .119 .22	.200 .129 .19	.169 .126 .20	.211 .141 .53	.136 .095 .148	.170 .120 .292		35
30	.120 .042 .3			.134 .315 .369	.202 .343 .425	.141 .312 .417	.155 .365 .516	.113 .242 .351	.082 .298 .478		30
25	.092 .151 .176			.098 .048 .13	.050 .016 .3	.115 .093 .136	.080 .058 .4	.090 .051 .18	.110 .085 .177		25
20	.086 .026 .2			.088 .114 .213	.054 .073 .076	.087 .209 .373	.046 .125 .187	.083 .130 .210	.085 .193 .367		20
15	.086 .104 .111			.100 .047 .23	.058 .022 .11	.088 .077 .30	.028 .015 .3	.021 .040 .048	.085 .060 .77		15
10	.086 .122 .133			.091 .159 .194	.069 .069 .069	.055 .079 .085	.066 .125 .298	.021 .040 .048	.076 .131 .206		10
5	.084 .039 .4	.067 .019 .5		.063 .026 .18	.041 .007 .6	.060 .021 .21	.068 .031 .42	.072 .006 .2	.065 .028 .98		5
0	.078 .122 .133	.075 .080 .087		.058 .096 .103	.040 .047 .050	.056 .084 .097	.063 .094 .131	.072 .076 .078	.054 .093 .126		0
5	.052 .018 .4	.070 .010 .2		.041 .005 .4	.056 .025 .21			.021 .006 .3	.051 .023 .34		5
0	.056 .068 .071	.070 .076 .079		.044 .045 .045	.060 .074 .105			.017 .025 .029	.045 .073 .095		0
5		.060 .022 .19		.034 .012 .2	.073 .040 .10			.037 .011 .14	.055 .028 .45		5
0		.058 .076 .104		.034 .041 .045	.072 .104 .147			.033 .050 .052	.050 .073 .123		0
5				.024 .002 .2	.044 .022 .5			.038 .011 .7	.038 .017 .14		5
0				.024 .025 .026	.034 .059 .083			.038 .047 .054	.031 .047 .079		0
5		.128 .1		.031 .003 .2	.025 .004 .2	.032 .014 .11	.044 .014 .10	.043 .054 .074	.040 .023 .26		5
0				.031 .033 .034	.025 .026 .029	.025 .049 .056			.027 .054 .103		0
5				.031 .1				.065 .018 .8	.061 .020 .9		5
0								.067 .077 .095	.067 .076 .095		0
5				.022 .008 .2				.078 .019 .8	.078 .019 .8		5
0				.022 .027 .030				.079 .094 .107	.079 .094 .107		0
5								.064 .017 .9	.057 .023 .11		5
0								.074 .079 .080	.058 .079 .080		0
5								.052 .015 .9	.052 .015 .9		5
0								.055 .064 .073	.055 .064 .073		0
5				.020 .000 .2				.052 .012 .11	.047 .016 .13		5
0				.020 .020 .020				.055 .062 .069	.054 .060 .069		0
5				.086 .1				.043 .015 .7	.049 .020 .8		5
0								.042 .054 .070	.044 .070 .084		0
5								.070 .016 .2	.070 .016 .2		5
0								.070 .081 .085	.070 .081 .085		0
5				.028 .1				.114 .023 .2	.085 .044 .3		5
0								.114 .129 .135	.091 .122 .134		0
5				.144 .009 .2		.436 .1			.241 .138 .3		5
0				.144 .150 .153					.153 .345 .425		0
5				.217 .124 .62				.321 .1	.219 .124 .63		5
0				.191 .310 .549					.193 .322 .547		0
5				.197 .1	.242 .035 .2	.271 .1			.238 .036 .4		5
0					.242 .265 .275				.239 .274 .276		0
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

NOVEMBER  
FL 410

												MEAN			LAT													
70N																70N												
65							.398 .135 .18 .424 .484 .682			.135 1						.384 .144 .19 .422 .482 .676	65											
60				.414 .099 .14 .396 .515 .543			.312 .193 .29 .233 .544 .658			.349 .160 .59 .331 .535 .655						.348 .167 .102 .271 .538 .659	60											
55				.399 .113 .34 .381 .518 .588			.534 .098 .5 .541 .607 .684			.263 .132 .52 .264 .389 .542			.284 .138 .58 .267 .417 .574			.239 .105 .28 .242 .341 .431			.300 .143 .177 .294 .445 .586	55								
50				.309 .145 .44 .326 .476 .568			.196 .126 .16 .199 .239 .517			.213 .131 .18 .168 .363 .519			.329 .082 .3 .380 .389 .392			.220 .136 .126 .185 .361 .534			.238 .142 .207 .205 .380 .576	50								
45				.234 .113 .29 .216 .375 .455			.249 .131 .17 .232 .402 .479			.195 .149 .31 .169 .314 .525			.222 .148 .40 .163 .389 .570			.249 .184 .53 .212 .475 .637			.171 .111 .150 .144 .274 .433			.202 .139 .320 .130 .333 .586	45					
40	.071 .015 .7 .073 .089 .093			.137 .085 .17 .094 .221 .322			.276 .137 .8 .273 .413 .462			.116 .151 .22 .053 .168 .538			.138 .099 .101 .099 .246 .399						.131 .077 .18 .113 .197 .318			.138 .109 .173 .094 .251 .410	40					
35	.121 .050 .4 .102 .157 .199			.110 .058 .34 .093 .173 .234			.091 .028 .4 .079 .112 .136			.035 .015 .2 .035 .045 .049			.079 .059 .12 .065 .111 .211									.100 .058 .56 .085 .162 .232	35					
30	.036 .010 .5 .031 .045 .051			.067 .021 .4 .074 .083 .087			.064 .029 .20 .061 .055 .127						.073 .010 .3 .074 .081 .085			.081 .036 .39 .072 .121 .181			.024 1						.071 .034 .72 .044 .107 .151	30		
25	.045 .026 .4 .047 .066 .077			.064 .004 .2 .064 .067 .068			.066 1						.060 1						.033 .004 .3 .030 .035 .038						.048 .020 .11 .053 .067 .078	25		
20				.064 .028 .18 .061 .092 .121			.009 1						.023 1						.047 .015 .13 .045 .055 .078						.055 .026 .33 .053 .079 .119	20		
15																.106 .002 .2 .106 .107 .107						.106 .002 .2 .106 .107 .107			15			
10				.150 1												.036 .016 .11 .029 .046 .071			.045 1						.045 .034 .13 .036 .050 .132	10		
5				.013 1			.011 1												.062 .013 .3 .068 .072 .074						.042 .026 .5 .044 .070 .074	5		
0																			.079 .016 .6 .083 .094 .099						.079 .016 .6 .083 .094 .099	0		
5							.023 .009 .2 .023 .028 .031												.078 .013 .9 .081 .089 .100						.068 .025 .11 .069 .087 .100	5		
10																			.060 .012 .6 .062 .072 .074						.060 .012 .6 .062 .072 .074	10		
15																			.053 .011 .6 .050 .066 .068						.053 .011 .6 .050 .066 .068	15		
20																			.062 .012 .6 .062 .072 .081						.062 .012 .6 .062 .072 .081	20		
25																												25
30																												30
35																.461 1									.461 1	35		
40				.228 .109 .60 .211 .320 .512															.437 1						.231 .112 .61 .212 .327 .512	40		
45S							.456 1									.278 1									.367 .089 .2 .367 .428 .452	45S		
15E 60E 105E 150E 165W 120W 75W 30W 15E																												

LONGITUDE



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

NOVEMBER  
FL 450

		MEAN										LAT
70N												70N
65					.560 .219 8 .535 .703 .971						.560 .219 8 .535 .703 .971	65
60						.506 .237 35 .472 .774 .962					.506 .237 35 .472 .774 .962	60
55						.354 .202 35 .312 .478 .848	.438 .250 54 .391 .667 1.017		.315 .142 29 .313 .418 .653		.383 .220 118 .240 .572 .982	55
50									.304 .171 123 .261 .487 .710		.304 .171 123 .261 .487 .710	50
45			.380 .171 24 .334 .526 .769		.352 .256 10 .223 .568 .899	.216 .107 13 .197 .318 .433	.376 .169 46 .382 .528 .741		.266 .162 146 .232 .414 .636		.299 .175 239 .263 .461 .725	45
40						.193 .113 90 .160 .299 .458			.215 .101 18 .205 .292 .457		.196 .112 108 .154 .294 .464	40
35			.160 .073 26 .139 .226 .336			.145 .104 11 .124 .254 .339					.155 .084 37 .129 .231 .368	35
30		.093 .013 4 .084 .105 .109	.080 .035 17 .076 .108 .154			.109 .064 40 .107 .163 .268					.100 .056 61 .090 .147 .255	30
25												25
20		.089 .038 14 .087 .122 .161	.012 1		.055 1			.056 .006 9 .055 .063 .068			.073 .035 25 .059 .105 .156	20
15			0.000 0.000 2 0.000 0.000 0.000								0.000 0.000 2 0.000 0.000 0.000	15
10		.193 1	.020 .020 2 .020 .034 .039			.041 .024 11 .025 .061 .092					.049 .047 14 .030 .063 .169	10
5			.022 1								.022 1	5
0												0
5				.024 .011 2 .024 .031 .034				.092 1			.046 .033 3 .034 .073 .090	5
10												10
15												15
20												20
25												25
30												30
35												35
40			.254 .108 60 .264 .350 .467					.266 1			.254 .107 61 .265 .350 .467	40
45S				.310 1		.590 1					.450 .140 2 .450 .545 .584	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E			



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

NOVEMBER  
FL 470

	MEAN										LAT
70N											70N
65					.720 .278 8 .736 1.022 1.127					.720 .278 8 .736 1.022 1.127	65
60						.659 .291 35 .626 1.005 1.232				.659 .291 35 .626 1.005 1.232	60
55						.458 .204 35 .465 .693 857	.581 .313 54 .505 .903 1.305	.433 .220 29 .407 .600 .967		.508 .271 118 .397 .765 1.194	55
50								.362 .199 123 .324 .584 .785		.362 .199 123 .324 .584 .785	50
45			.445 .188 24 .406 .630 .866		.522 .321 10 .402 .818 1.177	.343 .167 13 .330 .540 .594	.452 .191 46 .442 .594 .833	.337 .196 146 .299 .534 .781		.378 .208 239 .351 .571 .916	45
40						.255 .142 90 .204 .440 .551		.265 .105 18 .244 .354 .502		.257 .137 108 .201 .432 .551	40
35			.188 .089 26 .152 .268 .399			.169 .123 11 .133 .295 .401				.183 .101 37 .147 .292 .434	35
30		.111 .024 4 .115 .134 .136	.092 .042 17 .078 .132 .185			.143 .090 40 .126 .205 .364				.126 .080 61 .109 .181 .354	30
25											25
20		.104 .044 14 .105 .136 .198		.069 1			.062 .016 9 .062 .077 .081			.087 .041 24 .067 .121 .187	20
15											15
10	.214 1					.039 .014 11 .031 .056 .061				.053 .050 12 .035 .060 .181	10
5											5
0											0
5				.025 .013 2 .025 .033 .037			.090 1			.046 .033 3 .037 .073 .088	5
10											10
15											15
20											20
25											25
30											30
35						.195 1				.195 1	35
40			.279 .115 60 .299 .391 .485				.404 1			.281 .115 61 .299 .394 .485	40
45S				.355 1		.842 1				.599 .244 2 .599 .764 .832	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

NOVEMBER  
FL 490

MEAN												LAT
70N												70N
65					.950 .320 8 .960 1.346 1.397						.950 .320 8 .960 1.346 1.397	65
60						.835 .336 35 .751 1.258 1.617					.835 .336 35 .751 1.258 1.617	60
55						.571 .211 35 .558 .809 .941	.703 .337 54 .649 1.043 1.502		.603 .248 29 .599 .801 1.167		.639 .290 118 .595 .859 1.417	55
50									.452 .234 123 .427 .679 1.017		.452 .234 123 .427 .679 1.017	50
45			.526 .183 24 .546 .673 .911		.638 .352 10 .557 .934 1.376	.460 .249 13 .470 .645 .924	.516 .208 46 .531 .692 .890		.418 .227 145 .385 .631 .944		.460 .235 238 .363 .663 1.039	45
40						.330 .179 90 .287 .526 .719			.328 .102 18 .330 .420 .531		.330 .169 108 .262 .499 .705	40
35			.228 .101 26 .203 .346 .454			.265 .168 11 .264 .436 .508					.239 .125 37 .205 .363 .518	35
30		.129 .035 4 .132 .163 .170	.115 .065 17 .078 .164 .272			.164 .107 40 .135 .231 .431					.148 .096 61 .119 .208 .421	30
25												25
20		.120 .053 14 .110 .170 .236			.079 1			.093 .041 9 .081 .101 .189			.108 .050 24 .080 .154 .234	20
15												15
10		.236 1				.044 .028 11 .040 .052 .107					.060 .059 12 .044 .071 .210	10
5												5
0												0
5				.026 .015 2 .026 .036 .040				.092 1			.048 .033 3 .041 .076 .090	5
10												10
15												15
20												20
25												25
30												30
35						.268 1					.268 1	35
40			.345 .149 60 .350 .515 .621					.669 1			.350 .153 61 .352 .522 .660	40
45S				.488 1		1.045 1					.767 .279 2 .767 .956 1.034	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E			
	LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

NOVEMBER  
FL 510

	MEAN								LAT
70N									70N
65				1.131 .375 8 1.157 1.490 1.688				1.131 .375 8 1.157 1.490 1.688	65
60					968 .350 35 .961 1.239 1.765			968 .350 35 .961 1.239 1.765	60
55					736 .249 35 .710 .991 1.210	880 .347 54 852 1.215 1.626	728 .274 29 728 .996 1.330	800 .312 118 651 1.094 1.546	55
50							595 .288 123 536 .874 1.224	595 .288 123 536 .874 1.224	50
45		647 .235 24 .625 .916 1.115		762 .238 10 .773 1.058 1.080	609 .274 13 .651 .893 .968	621 .241 46 .538 .835 1.162	519 .258 144 491 .733 1.191	567 .261 237 528 .807 1.174	45
40					408 .214 90 .375 .650 .888		469 .164 18 447 .599 .817	418 .208 108 354 .648 .883	40
35		277 .139 26 .224 .416 .627			330 .193 11 .315 .547 .640			292 .159 37 249 .434 .657	35
30	147 .047 4 .148 .192 .204	149 .095 17 .099 .219 .391			204 .129 40 .157 .335 .519			185 .119 61 147 .282 .516	30
25									25
20	141 .061 14 .139 .184 .279			.069 1		113 .049 9 .090 .160 .213		127 .058 24 .090 .185 .264	20
15									15
10	257 1				.047 .034 11 .042 .054 .126			.064 .067 12 .043 .077 .232	10
5									5
0									0
5			.028 .018 2 .028 .039 .044			111 1		.055 .042 3 .043 .090 .108	5
10									10
15									15
20									20
25									25
30									30
35						474 1		.474 1	35
40		449 .182 60 .431 .642 .857				934 1		.457 .191 61 .434 .648 .906	40
45S			621 1		1.093 1			.857 .236 2 .857 1.017 1.064	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
	LONGITUDE								

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

NOVEMBER  
FL 530

MEAN											LAT
70N											70N
65					1.280 .338 .8 1.232 1.566 1.833					1.280 .338 .8 1.232 1.566 1.833	65
60						1.122 .372 .35 1.026 1.437 2.076				1.122 .372 .35 1.026 1.437 2.076	60
55						.919 .253 .35 .903 1.226 1.337	1.048 .364 .54 1.084 1.411 1.766	.858 .269 .29 .892 1.098 1.374		.963 .323 .118 .769 1.267 1.674	55
50								.741 .342 .123 .653 1.049 1.680		.741 .342 .123 .653 1.049 1.680	50
45			.800 .284 .24 .784 1.060 1.363		.790 .213 .10 .764 .964 1.211	.830 .342 .13 .873 1.112 1.389	.755 .332 .46 .691 .998 1.512	.659 .298 .144 .585 .941 1.338		.707 .309 .237 .645 1.017 1.424	45
40						.494 .236 .90 .478 .710 1.025		.578 .197 .18 .569 .717 .981		.508 .232 .108 .430 .711 1.012	40
35			.365 .191 .26 .289 .507 .875			.471 .223 .11 .440 .749 .791				.396 .206 .37 .324 .612 .862	35
30	.165 .059 .4 .164 .221 .238		.183 .096 .17 .147 .265 .395			.283 .170 .40 .220 .514 .640				.247 .155 .61 .199 .373 .637	30
25											25
20	.163 .071 .14 .154 .199 .322				.213 .1		.119 .046 .9 .103 .147 .220			.148 .066 .24 .119 .203 .302	20
15											15
10	.279 .1					.057 .027 .11 .051 .066 .121				.076 .066 .12 .054 .083 .247	10
5											5
0											0
5				.030 .020 .2 .030 .043 .048			.129 .1			.063 .050 .3 .049 .103 .126	5
10											10
15											15
20											20
25											25
30											30
35						.719 .1				.719 .1	35
40			.584 .244 .60 .563 .831 1.125				1.199 .1			.584 .254 .61 .567 .640 1.185	40
45S				.754 .1		1.445 .1				1.100 .346 .2 1.100 1.334 1.431	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

CODE: MEAN ST. DEV. N  
50% 84% 98%

NOVEMBER  
FL 550

	MEAN								LAT
70N									70N
65				1.489 .458 8 1.334 1.855 2.279				1.489 .458 8 1.334 1.855 2.279	65
60					1.367 .476 35 1.362 1.822 2.539			1.367 .476 35 1.362 1.822 2.539	60
55					1.105 .287 35 1.095 1.388 1.730	1.253 .392 54 1.247 1.657 2.022	1.132 .326 29 1.201 1.403 1.662	1.184 .355 118 1.110 1.534 1.984	55
50							933 .358 123 865 1.268 1.921	933 .358 123 865 1.268 1.921	50
45		1.027 .338 24 1.022 1.354 1.691		.959 .307 10 .889 1.185 1.593	1.087 .421 13 1.075 1.358 1.865	.914 .383 46 .810 1.306 1.788	.854 .309 144 .805 1.110 1.679	.901 .341 23 .844 1.210 1.746	45
40					.650 .245 90 .654 .884 1.212		.698 .218 18 .661 .926 1.055	.658 .241 108 .604 .909 1.193	40
35		.481 .215 26 .443 .660 1.018			.581 .364 11 .421 1.012 1.240			.511 .272 37 .436 .748 1.173	35
30	.216 .073 4 .243 .277 .277	.254 .102 17 .203 .376 .435			.408 .233 40 .315 .655 .937			.353 .218 61 .284 .548 .924	30
25									25
20	.216 .093 14 .225 .292 .395			.144 1		.155 .071 9 .124 .197 .307		.190 .089 24 .161 .265 .383	20
15									15
10	.339 1				.067 .013 11 .069 .074 .093			.090 .076 12 .070 .080 .286	10
5									5
0									0
5			.112 .002 2 .112 .113 .114			.189 1		.137 .037 3 .114 .165 .186	5
10									10
15									15
20									20
25									25
30									30
35					.909 1			.909 1	35
40		.769 .290 60 .742 1.053 1.326				1.366 1		.779 .298 61 .752 1.066 1.360	40
45S			1.214 1		1.761 1			1.488 .274 2 1.488 1.673 1.750	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
	LONGITUDE								

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

NOVEMBER  
FL 570

		MEAN										LAT
70N												70N
65					1.726 .514 8 1.525 2.366 2.517						1.726 .514 8 1.525 2.366 2.517	65
60						1.629 .460 .35 1.619 1.957 2.636					1.629 .460 .35 1.619 1.957 2.636	60
55						1.327 .311 .34 1.242 1.696 1.966	1.454 .382 .54 1.416 1.856 2.234	1.326 .407 .29 1.333 1.800 1.679			1.385 .375 .117 1.364 1.799 2.056	55
50								1.171 .405 .123 1.112 1.519 2.284			1.171 .405 .123 1.112 1.519 2.284	50
45			1.311 .365 .24 1.361 1.654 1.966		1.250 .255 .10 1.240 1.524 1.631	1.418 .523 .13 1.474 2.055 2.121	1.128 .359 .46 1.074 1.575 1.883	1.073 .313 .144 1.014 1.359 1.788			1.134 .355 .237 1.066 1.548 1.952	45
40						.845 .262 .90 .856 1.074 1.424		.964 .287 .17 1.016 1.292 1.385			.864 .270 .107 1.066 1.136 1.405	40
35			.637 .233 .26 .571 .787 1.215			.783 .335 .11 .635 1.180 1.290					.680 .275 .37 .613 1.114 1.283	35
30		.306 .120 .4 .353 .403 .411	.389 .135 .17 .379 .530 .656			.554 .245 .40 .473 .819 1.079					.492 .231 .61 .429 .770 1.062	30
25												25
20		.311 .128 .14 .298 .390 .563			.344 1			.250 .093 .9 1.06 .351 .413			.289 .117 .24 .229 .386 .550	20
15												15
10		.402 1				.103 .037 .11 1.03 .130 .172					.128 .090 .12 1.08 .145 .353	10
5												5
0												0
5				.287 .073 .2 .287 .336 .356			.252 1				.275 .061 .3 .252 .325 .355	5
10												10
15												15
20												20
25												25
30												30
35						1.260 1					1.260 1	35
40			1.018 .268 .60 .995 1.313 1.527				1.528 1				1.027 .273 .61 .997 1.327 1.530	40
45S				1.689 1		2.000 1					1.845 .156 .2 1.845 1.950 1.994	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E			

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

NOVEMBER  
FL 590

									MEAN	LAT
70N										70N
65					2.002 .428 8 2.023 2.342 2.719				2.002 .428 8 2.023 2.342 2.719	65
60						1.872 .446 35 1.827 2.232 2.906			1.872 .446 35 1.827 2.232 2.906	60
55						1.577 .322 34 1.580 1.912 2.171	1.719 .368 54 1.718 2.042 2.482	1.562 .416 29 1.602 1.995 2.191	1.639 .376 117 1.660 2.016 2.360	55
50								1.440 .450 123 1.356 1.836 2.562	1.440 .450 123 1.356 1.836 2.562	50
45		1.607 .395 24 1.555 1.974 2.321		1.491 .281 10 1.471 1.608 2.095	1.684 .549 13 1.719 2.098 2.685	1.395 .320 46 1.407 1.657 2.037	1.316 .303 143 1.286 1.594 1.994	1.389 .353 236 1.282 1.753 2.176	1.389 .353 236 1.282 1.753 2.176	45
40						1.091 .274 90 1.054 1.422 1.594		1.234 .353 17 1.229 1.591 1.782	1.113 .293 107 1.089 1.448 1.751	40
35		.866 .244 26 .793 1.063 1.480			.955 .341 11 .895 1.116 1.703			.892 .260 37 .809 1.106 1.641	.892 .260 37 .809 1.106 1.641	35
30	.495 .092 4 .486 .568 625	.552 .167 17 .563 .709 .859			.760 .252 40 .687 1.110 1.253			.685 .247 51 .633 .942 1.238	.685 .247 51 .633 .942 1.238	30
25										25
20	.437 .185 14 .453 .547 .836			.778 1		.357 .112 9 .377 .461 .529		.421 .178 24 .334 .545 .852	.421 .178 24 .334 .545 .852	20
15										15
10	.464 1				.260 .069 11 .279 .323 .358			.277 .087 12 .281 .343 .442	.277 .087 12 .281 .343 .442	10
5										5
0										0
5			.462 .142 2 .462 .559 .598			.351 1		.425 .127 3 .351 .523 .594	.425 .127 3 .351 .523 .594	5
10										10
15										15
20										20
25										25
30										30
35						1.741 1		1.741 1	1.741 1	35
40		1.321 .292 60 1.325 1.569 1.859				1.691 1		1.327 .293 61 1.328 1.576 1.859	1.327 .293 61 1.328 1.576 1.859	40
45S			1.959 1		2.606 1			2.283 .324 2 2.293 2.582 2.593	2.283 .324 2 2.293 2.582 2.593	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E	
	LONGITUDE									

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

DECEMBER  
FL 190

[illegible]



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

DECEMBER  
FL 210

								MEAN	LAT
70N									70N
65				.047 .016 10 .048 .061 .074				.047 .016 10 .048 .061 .074	65
60					.041 .018 42 .039 .052 .061			.041 .018 42 .038 .052 .081	60
55					.043 .014 33 .041 .055 .075	.044 .017 64 .043 .058 .072	.038 .014 27 .038 .047 .064	.042 .016 124 .041 .057 .071	55
50				.061 .004 2 .061 .064 .065			.056 .120 127 .040 .056 .088	.056 .119 129 .040 .057 .088	50
45		.050 .014 23 .048 .056 .089		.026 .015 13 .021 .038 .060	.033 .011 17 .031 .042 .056	.046 .020 76 .044 .064 .089	.037 .011 133 .036 .048 .063	.040 .016 262 .031 .053 .079	45
40	.018 1			.028 .013 5 .031 .039 .045	.047 .034 110 .041 .056 .104	.047 .018 9 .045 .064 .078	.038 .013 21 .036 .047 .065	.045 .031 146 .039 .055 .102	40
35		.048 .009 23 .047 .054 .067		.051 .015 5 .047 .062 .076	.031 .015 32 .029 .039 .070			.039 .016 60 .028 .053 .077	35
30		.043 .016 5 .043 .059 .060	.038 .009 18 .037 .048 .055		.035 .016 29 .032 .051 .068			.037 .014 52 .025 .052 .067	30
25	.026 1							.026 1	25
20		.042 .015 20 .039 .049 .091		.043 .015 15 .039 .062 .069		.029 .013 13 .029 .040 .053		.039 .016 48 .037 .048 .071	20
15		0.000 1						0.000 1	15
10		.032 .010 6 .028 .043 .047			.024 .011 8 .022 .037 .042			.027 .011 14 .020 .042 .047	10
5									5
0	.044 1							.044 1	0
5			.053 .011 5 .049 .064 .071					.053 .011 5 .049 .064 .071	5
10									10
15			.062 .023 3 .055 .081 .091					.062 .023 3 .055 .081 .091	15
20				.074 1				.074 1	20
25									25
30									30
35			.052 .010 4 .051 .062 .063		.020 1			.045 .015 5 .042 .061 .063	35
40		.045 .014 57 .045 .054 .080			.040 .015 2 .040 .050 .054	.062 .021 3 .051 .079 .090		.046 .015 62 .045 .055 .090	40
45S			.042 .016 4 .035 .055 .067					.042 .016 4 .035 .055 .067	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
	LONGITUDE								

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

DECEMBER  
FL 230

											MEAN			LAT							
70N																					70N
65																					65
60																					60
55																					55
50																					50
45																					45
40																					40
35																					35
30																					30
25																					25
20																					20
15																					15
10																					10
5																					5
0																					0
5																					5
10																					10
15																					15
20																					20
25																					25
30																					30
35																					35
40																					40
45S																					45S
15E	60E	105E	150E	165W	120W	75W	30W	15E													
LONGITUDE																					

CODE: MEAN ST. DEV. N  
50% 84% 98%

DECEMBER  
FL 250

	MEAN										LAT
70N											70N
65					.059 .026 10 .057 .078 .113					.059 .026 10 .057 .078 .113	65
60						.047 .022 40 .044 .068 .097				.047 .022 40 .044 .068 .097	60
55						.045 .016 33 .042 .066 .078	.052 .025 64 .049 .069 .111	.046 .021 27 .047 .064 .096		.049 .023 124 .042 .057 .103	55
50					.052 1				.060 .120 127 .042 .063 .100	.060 .120 128 .042 .063 .100	50
45			.061 .022 23 .054 .088 .110		.024 .006 11 .023 .031 .033	.040 .028 18 .032 .047 .120	.055 .027 77 .050 .077 .132	.041 .016 137 .039 .054 .078		.046 .023 266 .034 .062 .113	45
40					.056 .009 3 .053 .064 .065	.053 .068 107 .044 .059 .175	.042 .005 5 .040 .017 .048	.043 .015 22 .042 .053 .078		.051 .060 137 .044 .059 .134	40
35			.051 .014 25 .049 .064 .080		.086 .034 3 .065 .111 .130	.032 .013 26 .033 .048 .054				.044 .020 54 .032 .057 .086	35
30		.067 .054 5 .046 .097 .163		.040 .012 18 .038 .050 .065		.038 .022 29 .032 .061 .093				.042 .028 52 .029 .060 .095	30
25	.052 1									.052 1	25
20		.048 .018 19 .046 .054 .092			.059 .015 5 .059 .071 .081		.028 .008 13 .028 .034 .044			.042 .018 37 .042 .054 .089	20
15		.020 1								.020 1	15
10		.040 .018 6 .036 .054 .070				.027 .010 8 .029 .037 .038				.032 .015 14 .029 .044 .066	10
5											5
0											0
5				.054 .010 5 .052 .065 .068						.054 .010 5 .052 .065 .068	5
10											10
15				.078 .039 2 .078 .104 .114						.078 .039 2 .078 .104 .114	15
20											20
25											25
30											30
35				.119 1		.024 1				.072 .048 2 .072 .104 .117	35
40			.047 .016 57 .045 .062 .091			.067 .006 2 .067 .071 .073	.073 .016 3 .067 .086 .094			.049 .017 62 .044 .065 .094	40
45S				.047 .017 4 .045 .060 .071						.047 .017 4 .045 .060 .071	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

DECEMBER  
FL 270

MEAN												LAT
70N												70N
65					.066 .027 10 .062 .076 .125						.066 .027 10 .062 .076 .125	65
60						.056 .031 40 .047 .096 .130					.056 .031 40 .047 .096 .130	60
55						.046 .019 33 .045 .067 .083	.062 .032 64 .053 .086 .136	.053 .030 27 .031 .073 .134		.056 .029 124 .047 .079 .136		55
50									.063 .119 130 .045 .075 .111	.063 .119 130 .044 .075 .111		50
45	.045 .006 4 .046 .050 .053		.071 .034 23 .058 .108 .146		.027 .010 11 .026 .035 .043	.040 .036 21 .033 .045 .137	.066 .040 76 .055 .107 .188	.044 .022 134 .040 .058 .104		.052 .033 269 .043 .073 .148		45
40	.062 .011 2 .062 .069 .073				.036 .014 3 .040 .047 .051	.061 .091 111 .045 .069 .212	.059 .008 2 .059 .064 .067	.044 .018 20 .040 .055 .088		.058 .082 138 .043 .067 .186		40
35	.042 1		.058 .022 25 .057 .077 .106		.042 1	.037 .017 29 .032 .052 .076				.046 .022 56 .033 .067 .091		35
30	.058 1	.105 .119 5 .050 .155 .313	.040 .012 18 .039 .051 .065			.042 .026 29 .037 .055 .125				.048 .046 53 .038 .055 .137		30
25	.043 1				.044 1					.044 .001 2 .044 .044 .044		25
20		.048 .021 21 .046 .058 .103	.052 1		.043 .012 8 .039 .052 .068		.025 .010 13 .025 .034 .043			.040 .020 43 .036 .054 .080		20
15		.013 .003 2 .013 .015 .016								.013 .003 2 .013 .015 .016		15
10		.050 .028 6 .045 .067 .101				.030 .010 8 .029 .040 .042				.038 .023 14 .029 .054 .093		10
5												5
0		.030 1								.030 1		0
5				.060 .015 5 .054 .076 .081						.060 .015 5 .054 .076 .081		5
10												10
15				.065 .007 3 .063 .070 .074						.065 .007 3 .063 .070 .074		15
20					.034 1					.034 1		20
25												25
30												30
35			.028 1	.076 1		.026 1				.043 .023 3 .028 .061 .074		35
40			.054 .030 57 .047 .061 .150			.064 .018 2 .061 .076 .081	.079 .013 3 .076 .090 .096			.055 .029 62 .048 .067 .148		40
45S				.054 .013 4 .048 .064 .074						.054 .013 4 .048 .064 .074		45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E			
	LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

DECEMBER  
FL 290

MEAN										LAT
70N										70N
65					.082 .025 10 .084 .107 .115				.082 .025 10 .084 .107 .115	65
60						.072 .046 40 .056 .126 .168		.089 .022 3 .096 .107 .111	.073 .045 43 .059 .124 .166	60
55						.052 .027 33 .046 .077 .105	.083 .046 64 .071 .136 .185	.065 .042 31 .058 .099 .166	.071 .043 128 .050 .111 .162	55
50						.147 1	.041 .007 4 .043 .048 .048	.070 .118 136 .048 .090 .171	.070 .116 141 .048 .090 .169	50
45	.061 .035 8 .042 .091 .134		.084 .045 23 .062 .137 .173		.032 .017 11 .031 .039 .071	.051 .029 18 .042 .082 .113	.061 .061 95 .065 .128 .252	.051 .032 141 .041 .075 .138	.064 .047 296 .040 .100 .221	45
40	.043 .024 16 .036 .061 .098				.037 1	.063 .063 104 .049 .090 .168	.069 .032 10 .057 .103 .132	.048 .021 20 .044 .064 .098	.059 .055 151 .047 .083 .165	40
35	.045 .016 5 .048 .080 .061		.069 .033 23 .059 .110 .128		.049 .027 3 .035 .070 .085	.042 .024 32 .036 .073 .096			.053 .030 63 .045 .087 .124	35
30	.044 .011 5 .044 .056 .057	.112 .152 8 .059 .070 .432	.042 .013 18 .044 .055 .064		.056 1	.045 .031 29 .040 .064 .133			.053 .064 61 .044 .061 .159	30
25	.032 .001 2 .032 .032 .032	.027 1			.064 1				.039 .015 4 .032 .049 .062	25
20		.055 .023 19 .050 .064 .117	.055 .021 4 .057 .070 .081	.087 .039 2 .087 .114 .124	.056 .012 10 .055 .066 .078		.026 .011 13 .030 .036 .045		.049 .025 48 .031 .062 .126	20
15		.024 .006 2 .024 .027 .029	.038 .025 6 .036 .061 .075		.032 1				.034 .021 9 .029 .053 .074	15
10		.045 .022 8 .040 .060 .088				.029 .008 8 .029 .038 .041			.037 .019 16 .027 .052 .082	10
5		.009 1							.009 1	5
0										0
5				.064 .018 5 .055 .083 .092					.064 .018 5 .055 .083 .092	5
10										10
15				.033 1	.035 1				.044 .009 2 .044 .050 .053	15
20										20
25			.020 1						.020 1	25
30			.032 .006 2 .032 .035 .037						.032 .006 2 .032 .035 .037	30
35			.035 1	.071 .037 2 .071 .095 .106		.028 1			.051 .032 4 .032 .072 .103	35
40			.061 .042 57 .052 .076 .220			.061 .030 2 .061 .081 .090	.085 .011 3 .085 .095 .098		.062 .041 62 .051 .085 .215	40
45S				.036 .014 4 .033 .056 .077					.056 .014 4 .053 .066 .077	45S
15E	60E	105E	150E	165W	120W	75W	30W	15E		
LONGITUDE										

		MEAN												LAT			
70N															70N		
65						.115	.031	10						.115	.031	10	65
						.115	.143	164						.115	.143	164	
60									.094	.058	40			.179	.010	3	60
									.075	.175	206			.184	.186	187	
55					.049	.021	2		.060	.036	33	.115	.066	.101	.073	38	55
					.046	.066	.075		.052	.093	146	.108	.184	.083	.175	266	
50					.089	.049	5	.075			1	.204		.188	.118	132	50
					.079	.143	154							.082	.115	216	
45	.035	.008	6		.106	.058	23	.108	.085	10	.050	.030	.091	.074	.060	21	45
	.031	.044	.048		.091	.174	208	.057	.203	274	.033	.091	.097	.040	.149	210	
40	.048	.005	3		.071	.027	5	.104	.054	5	.036	.013	8	.072	.059	124	40
	.051	.052	.052		.058	.090	120	.106	.159	170	.035	.052	.053	.052	.119	252	
35	.045	.022	7		.084	.050	27				.048	.024	15	.056	.048	35	35
	.037	.054	.088		.067	.125	209				.042	.067	.103	.047	.064	218	
30	.041	.008	3	.154	.199	5	.046	.019	18		.061	.047	12	.046	.035	29	30
	.048	.047	.047	.050	.254	513	.048	.063	.080		.045	.043	179	.036	.057	147	
25	.050	.031	6		.042	.005	2				.043	.014	11				25
	.046	.066	.106		.042	.045	.047				.043	.049	.076				
20				.057	.025	19	.036	.015	6	.046	.009	3		.054	.016	17	20
				.053	.066	124	.039	.046	.057	.046	.053	.056		.052	.069	.083	
15				.058	1		.029	.010	3				.025	.009	4		15
							.025	.037	.041				.026	.032	.035		
10				.049	.025	7				.019	1		.029	.006	3		10
				.054	.069	.090							.030	.034	.036		
5							.023	.011	2					.029	.008	8	5
							.023	.030	.034					.028	.036	.039	
0							.026	.001	2								0
							.026	.026	.026								
5							.057	.026	7								5
							.054	.080	.1								

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

 DECEMBER  
 FL 330

										MEAN			LAT						
70N										.215 .214	.022 .233	3 .241				.215 .214	.022 .233	3 .241	70N
65										.096 .108	.036 .125	3 .132				.166 .149	.060 .241	7 .250	65
60										.158 .167	.082 .249	56 .292				.312		1	60
55										.108 .082	.082 .174	40 .292				.153 .149	.090 .260	80 .313	55
50										.151 .151	.040 .233	4 .234				.181 .181		1	50
45	.049 .054	.011 .058	4 .059							.145 .143	.081 .230	23 .266				.056 .056	.010 .065	5 .056	45
40	.077 .077	.024 .092	2 .099							.106 .075	.046 .140	3 .166				.124 .096	.057 .192	9 .217	40
35	.034 .031	.010 .042	3 .046							.092 .077	.057 .152	36 .226				.052 .052	.011 .059	2 .062	35
30	.054 .032	.038 .083	3 .104							.102 .051	.135 .108	7 .387				.054 .049	.026 .083	18 .102	30
25	.072		1							.034 .035	.023 .050	4 .070				.046 .058	.019 .059	3 .060	25
20										.054 .054	.027 .067	21 .128				.052 .060	.029 .075	5 .092	20
15										.040		1				.043 .037	.013 .055	5 .064	15
10										.061 .056	.033 .087	6 .117							10
5										.033 .033	0 .033	2 .033							5
0										.025 .025	.002 .026	2 .027							0
5										.005 .005	.002 .006	2 .006							5
10										.014 .014	.000 .014	2 .014							10
15										.011		1							15
20																			20
25																			25
30																			30
35																			35
40																			40
45S																			45S
15E	60E	105E	150E	165W	120W	75W	30W	15E											
LONGITUDE																			

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

DECEMBER  
FL 350

[illegible]



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

DECEMBER  
FL 370

	MEAN										LAT
70N											70N
65					.263	.106	.24	.276	.081	.12	65
60					.272	.369	.472	.280	.359	.391	60
55				.197	.74	.10	.157	.092	.34	.235	55
50				.157	.92	.400	.134	.254	.365	.240	50
45				.220	.149	.27	.189	.088	.20	.198	45
40				.199	.303	.575	.172	.207	.421	.195	40
35				.337	.156	.17	.143	.087	.14	.213	35
30				.293	.445	.669	.104	.276	.285	.213	30
25										.285	25
20				.267	.135	.23	.121	.090	.28	.196	20
15				.255	.374	.547	.093	.205	.327	.187	15
10				.121	.025	.6	.131	.109	.259	.310	10
5				.111	.136	.167	.078	.154	.218	.094	5
0				.119	.037	.2	.102	.065	.34	.102	0
5				.143	.198	.203	.107	.163	.249	.086	5
10				.136	.064	.4	.054	.088	.162	.071	10
15				.107	.055	.8	.039	.017	.10	.068	15
20				.070	.028	.6	.046	.055	.060	.030	20
25				.054	.037	.4	.039	.011	.8	.067	25
30				.050	.090	.098	.039	.049	.052	.066	30
35							.039	.001	.2	.034	35
40							.039	.040	.040	.031	40
45							.030	.007	.16	.029	45
50							.030	.036	.044	.027	50
55							.027	.006	.11	.029	55
60							.027	.037	.040	.027	60
65							.026	.003	.6	.026	65
70							.026	.028	.030	.027	70
75							.053	.036	.10	.032	75
80							.042	.075	.128	.034	80
85							.032	.012	.11	.033	85
90							.033	.045	.049	.033	90
95							.043	.013	.14	.024	95
100							.044	.054	.065	.024	100
105							.050	.021	.11	.015	105
110							.049	.057	.096	.015	110
115							.069	.021	.5	.018	115
120							.063	.065	.104	.018	120
125							.126	.003	.2	.126	125
130							.126	.128	.129	.126	130
135							.139		.1	.145	135
140							.171	.111	.5	.094	140
145							.094	.289	.339		145
150							.121	.095	.60	.126	150
155							.089	.192	.382	.126	155
160							.143	.011	.2	.126	160
165							.143	.150	.154	.126	165
170							.098	.028	.4	.113	170
175							.098	.126	.126	.126	175



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

DECEMBER  
FL 410

	MEAN										LAT
70N											70N
65					.646	.141	.10				65
					.672	.753	.830				
60				.433	.121	.4		.370	.151	.43	60
				.480	.523	.539		.368	.498	.690	
55				.463	.197	.21	.261	.125	.8		55
				.502	.622	.838	.259	.413	.447		
50				.365	.209	.37	.210	.097	.13		50
				.372	.548	.847	.179	.304	.385		
45			.350	.181	.31	.381	.225	.14	.157	.104	45
			.298	.509	.809	.327	.676	.805	.145	.292	
40	.193	.039	.4		.170	.136	.21		.148	.078	40
	.195	.227	.242		.114	.267	.511		.174	.223	
35	.114	.039	.20		.158	.092	.31	.076	.116	.076	35
	.107	.155	.184		.145	.241	.375		.104	.132	
30	.051	.031	.11	.097	.038	.5	.095	.102	.153	.100	30
	.038	.078	.113	.095	.136	.143	.074	.099	.110	.234	
25	.071	.014	.7	.063	.007	.3	.061	.1	.099	.064	25
	.068	.088	.091	.060	.069	.072			.087	.137	
20				.068	.035	.26	.023	.011	.062	.043	20
				.061	.079	.165	.020	.036	.040	.106	
15							.015	.011	.047	.025	15
							.011	.028	.042	.065	
10				.106	.067	.6	.012	.009	.028	.007	10
				.103	.155	.213	.014	.021	.026	.035	
5				.008	.006	.3	.014	.009	.026	.008	5
				.009	.012	.014	.019	.023	.028	.032	
0							.027	.009	.033	.010	0
							.027	.036	.033	.043	
5							.058	.038	.030	.006	5
							.049	.080	.032	.035	
10							.031	.010	.033		10
							.031	.043			
15							.037	.017	.037	.016	15
							.032	.054	.034	.045	
20							.040	.016			20
							.040	.059			
25							.080	.053			25
							.059	.143			
30							.114	.062			30
							.127	.182			
35							.180	.075	.033	.1	35
							.168	.256			
40				.174	.091	.57			.237	.176	40
				.149	.279	.372			.237	.357	
45S							.163	.069			45S
							.164	.231			
15E	60E	105E	150E	165W	120W	75W	30W	15E			
LONGITUDE											



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

 DECEMBER  
 FL 450

	MEAN										LAT
70N											70N
65					.923 .333 10 .891 1.313 1.385					.923 .333 10 .891 1.313 1.385	65
60						.591 .249 41 .609 .833 1.041				.591 .249 41 .609 .833 1.041	60
55						.527 .295 33 .445 .881 1.260	.564 .238 65 .498 .791 1.075	.463 .303 25 .420 .661 1.198		.533 .271 123 .481 .757 1.190	55
50								.402 .208 129 .365 .584 .972		.402 .208 129 .365 .584 .972	50
45			.547 .239 23 .516 .690 1.115		.321 .116 11 .307 .429 .537	.447 .268 17 .459 .695 .970	.455 .247 76 .391 .721 .971	.334 .182 129 .299 .520 .752		.396 .225 256 .210 .636 .981	45
40						.288 .197 98 .228 .494 .758		.308 .162 20 .253 .476 .626		.292 .192 119 .241 .493 .754	40
35			.216 .106 22 .189 .345 .407			.194 .117 26 .168 .278 .454				.204 .112 48 .136 .331 .421	35
30	.126 .050 5 .140 .172 .172		.117 .111 18 .096 .113 .435		.192 1	.131 .084 32 .110 .201 .352				.127 .091 56 .080 .182 .387	30
25											25
20	.090 .044 19 .082 .107 .208				.112 .032 2 .112 .133 .142		.050 .018 13 .053 .068 .077			.076 .042 34 .062 .098 .178	20
15											15
10	.145 .096 6 .140 .216 .305					.044 .013 8 .040 .057 .067				.088 .081 14 .049 .166 .285	10
5											5
0											0
5				.116 .038 5 .097 .145 .182						.116 .038 5 .097 .145 .182	5
10											10
15											15
20											20
25				.137 1						.137 1	25
30				.125 .004 2 .125 .128 .129						.125 .004 2 .125 .128 .129	30
35				.134 .002 2 .134 .135 .136		.098 1				.122 .017 3 .131 .134 .136	35
40			.218 .106 57 .206 .301 .420			.226 .084 2 .226 .283 .307	.223 .049 3 .245 .261 .267			.218 .103 62 .206 .301 .418	40
45S				.255 .035 4 .259 .282 .296						.255 .035 4 .259 .282 .296	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

										MEAN			LAT
70N													70N
65					.052 .354 .10 .962 1.454 1.566							.052 .354 .10 .962 1.454 1.566	65
60							.716 .281 .41 .742 .952 1.334					.716 .281 .41 .742 .952 1.334	60
55							.635 .356 .33 .592 .969 1.446	.689 .284 .65 647 1.004 1.246	.581 .378 .25 .472 .772 1.547			.652 .328 .123 .629 .958 1.280	55
50									.510 .279 .129 .486 .765 1.162			.510 .279 .129 .486 .765 1.162	50
45			.608 .216 .23 647 .619 .990		.341 .157 .11 274 .468 .653		.577 .352 .17 502 .965 1.215	.559 .292 .76 535 .884 1.160	.401 .207 .129 347 .604 .936			.476 .261 .256 261 .759 1.147	45
40							.335 .196 .99 280 .594 .757		.364 .194 .19 363 .510 .796			.340 .196 .118 270 .564 .773	40
35			.266 .146 .22 225 .456 .535				.260 .174 .23 220 .464 .641					.263 .161 .45 222 .467 .614	35
30		.157 .067 .5 .162 .218 .237	.136 .119 .18 103 .158 .472				.151 .119 .29 123 .233 .490					.146 .115 .52 082 .211 .530	30
25													25
20		.107 .046 .19 .103 .132 .229			.125 .041 .2 125 .153 .164			.055 .017 .13 058 .074 .076				.088 .046 .34 070 .117 .200	20
15													15
10		.174 .119 .6 163 .252 .380					.046 .014 .6 040 .056 .073					.101 .101 .14 049 .192 .351	10
5													5
0													0
5				.130 .039 .5 123 .159 .194								.130 .039 .5 123 .159 .194	5
10													10
15													15
20													20
25													25
30													30
35							.216 .1					.216 .1	35
40			.251 .131 .57 227 .374 .510				.240 .018 .2 240 .252 .257	.351 .039 .3 367 .382 .388				.255 .128 .62 226 .376 .505	40
45S				.322 .090 .4 279 .387 .465								.322 .090 .4 279 .387 .465	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E				

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

DECEMBER  
FL 490

MEAN												LAT													
70N												70N													
65					.288 .038	.488 1.831	10 2.039					.288 .038	.488 1.831	10 2.039	65										
60						.873 .834	.307 1.186	.41 1.492				.873 .834	.307 1.186	.41 1.492	60										
55						.768 .602	.487 1.320	.32 2.017		.854 .836	.351 1.271	.65 1.521	.744 .660	.452 .947	.25 1.911	.809 .724	.414 1.246	.122 1.818	55						
50													.581 .534	.310 .939	.129 1.221	.581 .534	.310 .939	.129 1.221	50						
45					.764 .832	.237 .986	.23 1.083		.472 .345	.253 .833	.11 .920	.590 .554	.400 1.092	.17 1.553	.649 .621	.345 .972	.76 1.384	.495 .468	.259 .714	.129 1.193	.577 .317	.312 .908	.256 1.268	45	
40									.407 .362	.232 .625	.99 966						.442 .434	.220 .592	.19 .929	.413 .336	.230 .625	.118 1.001	40		
35						.335 .267	.196 .602	.22 .715				.292 .230	.190 .461	.23 .702							.313 .267	.194 .523	.45 .744	35	
30					.188 .184	.087 .265	.5 303	.171 .139	.136 .271	.18 .527		.195 .146	.226 .257	.29 .873							.186 .107	.189 .266	.52 .693	30	
25																								25	
20					.123 .125	.053 .144	.19 .258		.147 .147	.058 .186	.2 .203				.071 .079	.018 .086	.13 .096				.105 .084	.051 .139	.34 .238	20	
15																								15	
10					.202 .187	.139 .287	.6 .447					.046 .040	.013 .064	.8 .067							.113 .059	.120 .219	.14 .410	10	
5																								5	
0																								0	
5								.144 .150	.042 .175	.5 .207											.144 .150	.042 .175	.5 .207	5	
10																								10	
15																								15	
20																								20	
25																								25	
30																								30	
35												.245		1							.245		1	35	
40						.315 .283	.161 .463	.57 .645				.245 .245	.030 .265	.2 .274	.477 .462	.024 .495	.3 .509				.321 .276	.159 .468	.62 .642	40	
45S						.372 .384	.125 .476	.4 .528													.372 .384	.125 .476	.4 .528	45S	
	15E	60E	105E	150E	165W	120W	75W	30W	15E																
	LONGITUDE																								

LONGITUDE





CODE:

MEAN	ST. DEV.	N
50%	84%	98%

DECEMBER  
FL 530

	MEAN								LAT
70N									70N
65				1.811 .495 10 1.874 2.158 2.547				1.811 .495 10 1.874 2.158 2.547	65
60					1.252 .367 41 1.190 1.564 2.170			1.252 .367 41 1.190 1.564 2.170	60
55					1.123 .540 32 1.036 1.682 2.215	1.172 .437 64 1.146 1.588 2.036	1.054 .470 25 1.046 1.387 2.142	1.134 .475 121 1.074 1.586 2.206	55
50							.889 .409 129 839 1.335 1.873	.889 .409 129 839 1.335 1.873	50
45		1.267 .430 22 1.131 1.552 2.081		.567 .142 11 .519 .703 .859	1.082 .524 17 .851 1.715 2.033	.975 .511 76 904 1.380 2.129	.767 .364 129 719 1.095 1.752	.880 .453 255 775 1.332 1.967	45
40					.635 .383 99 .541 1.001 1.581		.702 .301 19 696 .992 1.298	.646 .372 118 543 .995 1.577	40
35		.572 .257 22 .559 .912 .977			.509 .389 23 .357 .747 1.456			.540 .333 45 .462 .884 1.447	35
30	.915 .091 5 .308 .407 .442	.266 .178 18 .218 .372 .704			.355 .334 29 .264 .460 1.273			.320 .275 52 .179 .438 .942	30
25									25
20	.157 .072 19 .158 .198 .334			.230 .104 2 .230 .300 .329		.102 .028 13 .101 .124 .155		.140 .071 34 .106 .179 .354	20
15									15
10	.263 .189 6 .234 .362 .609				.081 .017 8 .056 .081 .088			.148 .160 14 .076 .271 .552	10
5									5
0									0
5			.172 .053 5 .179 .224 .234					.172 .053 5 .179 .224 .234	5
10									10
15									15
20									20
25									25
30									30
35					.382 1			.382 1	35
40		.501 .226 57 .481 .723 .916			.674 .152 2 .674 .777 .819	.621 .134 3 671 .727 .751		.512 .224 62 .491 .760 .914	40
45S			.547 .124 4 .564 .640 .695					.547 .124 4 .564 .640 .695	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
LONGITUDE									

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

DECEMBER  
FL 550

MEAN											LAT
70N											70N
65					1.995 .532 10 2.148 2.489 2.640					1.995 .532 10 2.148 2.489 2.640	65
60						1.426 .318 40 1.506 1.773 1.935				1.426 .318 40 1.506 1.773 1.935	60
55						1.344 .616 .32 1.314 2.045 2.502	1.387 .455 .64 1.339 1.816 2.345	1.294 .481 .25 1.266 1.727 2.497		1.356 .509 121 1.303 1.816 2.415	55
50								1.100 .447 129 1.001 1.586 2.052		1.100 .447 129 1.001 1.586 2.052	50
45		1.410 .394 .20 1.401 1.835 1.978		773 .239 11 704 .933 1.286		1.297 .441 17 1.331 1.694 2.166	1.111 .512 .76 1.038 1.516 2.444	.954 .372 129 994 1.313 1.877		1.053 .448 253 994 1.432 2.014	45
40						.833 .395 .99 744 1.295 1.765		.905 .329 .19 923 1.207 1.391		.844 .386 118 735 1.279 1.757	40
35		.741 .287 .22 762 1.051 1.241				.603 .437 .23 456 1.054 1.619				.670 .378 .45 600 1.082 1.368	35
30	.459 .154 .5 408 .611 .697	.373 .233 .18 283 .629 .870				.526 .401 .29 386 .910 1.679				.466 .341 .52 272 .705 1.664	30
25											25
20	.208 .085 .19 202 .270 .418			.344 .023 .2 344 .360 .366			.137 .041 .13 125 .147 .242			.189 .086 .34 142 .271 .394	20
15											15
10	.337 .202 .6 290 .427 .712					.072 .018 .8 .070 .091 .102				.186 .187 .14 .092 .325 .647	10
5											5
0											0
5			.187 .040 .5 198 .222 .239							.187 .040 .5 198 .222 .239	5
10											10
15											15
20											20
25											25
30											30
35						.599 .1				.599 .1	35
40		.651 .264 .57 668 .865 1.210				.910 .067 .2 910 .956 .974	.996 .045 .3 986 1.034 1.053			.676 .268 .62 636 .914 1.200	40
45S			.714 .122 .4 709 .814 .881							.714 .122 .4 709 .814 .881	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

DECEMBER  
FL 570

	MEAN								LAT
70N									70N
65				2.188 .457 10 2.228 2.567 2.935				2.188 .457 10 2.228 2.567 2.935	65
60					1.667 .355 39 1.675 1.969 2.500			1.667 .355 39 1.675 1.969 2.500	60
55					1.590 .610 32 1.703 2.164 2.557	1.609 .459 63 1.583 2.056 2.540	1.524 .454 24 1.440 1.927 2.459	1.587 .504 119 1.565 2.056 2.573	55
50							1.316 .447 129 1.242 1.765 2.233	1.316 .447 129 1.242 1.765 2.233	50
45		1.657 .435 20 1.760 2.036 2.301		1.016 .178 11 1.026 1.177 1.294	1.614 .313 17 1.499 1.898 2.259	1.384 .490 76 1.330 1.731 2.574	1.181 .355 128 1.149 1.519 2.090	1.302 .435 252 1.954 1.715 2.237	45
40					1.068 .402 99 1.023 1.551 1.876		1.050 .347 19 1.032 1.350 1.635	1.065 .393 118 1.980 1.524 1.867	40
35		.935 .311 22 .948 1.274 1.434			.793 .425 23 .753 1.226 1.626			.863 .380 45 .855 1.247 1.603	35
30	.645 .221 5 .608 .805 1.012	.487 .272 18 .427 .693 1.111			.690 .411 29 .558 1.138 1.629			.615 .366 52 .395 1.019 1.402	30
25									25
20	.305 .159 19 .259 .347 .747			.440 .081 2 .440 .495 518		.218 .112 13 .176 .286 .496		.280 .151 34 .228 .352 .670	20
15									15
10	.444 .198 6 .394 .513 .824				.120 .040 8 .129 .154 .172			.259 .208 14 .165 .407 .753	10
5									5
0									0
5			.233 .042 5 .232 .277 .281					.233 .042 5 .232 .277 .281	5
10									10
15									15
20									20
25									25
30									30
35						.817 1		.817 1	35
40		.887 .318 57 .862 1.111 1.614			.146 .025 2 .146 1.162 1.169	1.294 .270 3 1.429 1.502 1.532		.915 .326 62 .853 1.172 1.613	40
45S			.907 .119 4 .901 .997 1.071					.907 .119 4 .901 .997 1.071	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
LONGITUDE									

DECEMBER  
FL 590

									MEAN	LAT
70N										70N
65					2.358 .456 .10 2.206 2.750 3.264				2.358 .456 .10 2.206 2.750 3.264	65
60						1.904 .358 .38 1.938 2.206 2.625			1.904 .358 .38 1.938 2.206 2.625	60
55						1.813 .578 .32 1.844 2.468 2.647	1.833 .468 .63 1.788 2.279 2.870	1.788 .441 .24 1.678 2.202 2.610	1.818 .495 .119 1.788 2.336 2.764	55
50								1.528 .453 .129 1.487 1.963 2.447	1.528 .453 .129 1.487 1.963 2.447	50
45		1.928 .516 .20 1.911 2.393 2.906		1.333 .321 .11 1.283 1.675 1.848	2.041 .368 .17 2.059 2.518 2.582	1.648 .566 .75 1.502 2.138 3.088	1.439 .336 .128 1.422 1.719 2.243	1.577 .475 .251 1.483 2.059 2.572		45
40						1.325 .421 .99 1.304 1.776 2.141		1.221 .386 .19 1.243 1.609 1.891	1.309 .417 .118 1.259 1.731 2.127	40
35		1.184 .388 .22 1.111 1.538 1.971				1.057 .397 .23 1.138 1.305 1.833			1.119 .398 .45 1.138 1.476 2.053	35
30	.802 .205 .5 .797 1.013 1.061	.693 .363 .18 .628 .322 1.577				.911 .416 .29 .852 1.342 1.831			.825 .398 .52 .621 1.255 1.739	30
25										25
20	.449 .254 .19 .383 .573 1.133			.612 .109 .2 .612 .686 .717			.386 .201 .13 .376 .652 .698		.435 .234 .34 .345 .640 .966	20
15										15
10	.598 .178 .6 .507 .691 .946					.233 .090 .8 .214 .336 .375			.389 .225 .14 .361 .510 .887	10
5										5
0										0
5			.306 .027 .5 .311 .334 .338						.306 .027 .5 .311 .334 .338	5
10										10
15										15
20										20
25										25
30										30
35						1.035 .1			1.035 .1	35
40		1.139 .312 .57 1.125 1.468 1.792				1.396 .101 .2 1.396 1.465 1.493	1.707 .390 .3 1.864 2.015 2.077		1.174 .337 .62 1.083 1.525 1.923	40
45S			1.157 .158 .4 1.235 1.259 1.270						1.157 .158 .4 1.235 1.259 1.270	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E	

# **Appendix B** **Ambient Ozone Climatological Tabulations in 10° Latitude by** **45° Longitude by 2000-ft Altitude Intervals by Season**

[Units of ozone, ppmv.]

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

WINTER  
FL 190

	MEAN										LAT
90N											90N
80						.043	.010	.153			80
70						.042	.051	.067	.039	.014	70
60					.042	.014	.16				60
50					.041	.055	.069				50
40								.042	.015	.241	40
30								.041	.014	.184	30
20								.040	.051	.074	20
10								.058	.097	.199	10
0								.046	.071	.095	0
10S								.038	.011	.682	10S
20S								.040	.031	.1199	20S
30S								.038	.048	.061	30S
40S								.040	.012	.72	40S
50S								.039	.048	.069	50S
60S								.041	.018	.455	60S
70S								.040	.054	.080	70S
80S								.035	.016	.104	80S
90S								.033	.048	.073	90S
90N								.039	.016	.41	90N
80								.037	.052	.073	80
70								.027	.012	.12	70
60								.027	.039	.044	60
50								.042	.011	.5	50
40								.043	.051	.054	40
30								.029	.020	.10	30
20								.029	.020	.073	20
10								.031	.012	.25	10
0								.026	.049	.053	0
10S								.017	.003	.4	10S
20S								.017	.020	.022	20S
30S								.019	.008	.2	30S
40S								.019	.025	.028	40S
50S								.026	.011	.27	50S
60S								.023	.036	.049	60S
70S								.023	.010	.19	70S
80S								.019	.036	.038	80S
90S											90S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

MEAN	ST. DEV.	N
50%	84%	98%

[illegible]

MEAN	ST. DEV.	N
50%	84%	98%

MEAN	LAT
------	-----

LONGITUDE

MEAN	ST. DEV.	N
50%	84%	98%

WINTER  
FL 250

[illegible]



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

WINTER  
FL 270

											MEAN																		
90N														90N															
80														80															
70											.082 .044 153 .069 .126 210			.068 .038 16 .059 .091 160	.081 .044 169 .067 .125 206	70													
60											.060 .023 18 .062 .076 116						.060 .023 18 .058 .076 116	60											
50											.059 .035 239 .050 .084 157			.068 .042 184 .053 .107 191			.073 .098 206 .059 .098 159			.066 .064 629 .053 .094 178	50								
40	.046 .019 11 .047 .054 .088										.078 .037 63 .061 .119 153									.054 .045 1241 .044 .075 166	40								
30	.042 1										.059 .033 128 .053 .077 144			.067 .054 19 .051 .091 212			.053 .061 279 .042 .070 187			.051 1			.049 .022 72 .046 .069 106			.054 .051 500 .044 .071 174	30		
20	.042 .013 3 .043 .053 .057										.050 .054 36 .042 .056 176			.035 .020 6 .042 .054 .055			.045 .018 26 .042 .050 .099			.045 .018 27 .043 .056 .097			.029 .012 34 .029 .042 .054			.042 .032 132 .036 .054 103			20
10											.048 .021 42 .047 .063 .094															.044 .021 57 .046 .062 .089	10		
0											.039 .023 13 .032 .055 .094															.031 .017 35 .028 .040 .073			0
10											.025 .014 3 .019 .037 .044			.053 .021 6 .051 .075 .081												.044 .023 9 .045 .068 .081			10
20														.057 .015 4 .060 .069 .073			.034 1									.052 .016 5 .057 .067 .073			20
30	.075 1										.057 .022 8 .056 .069 .096												.034 .002 3 .034 .036 .037			.053 .021 12 .055 .071 .095			30
40											.062 .014 3 .060 .074 .079			.052 .028 174 .047 .065 145			.052 .017 7 .055 .064 .075			.051 .023 3 .046 .070 .081						.052 .027 187 .047 .066 140			40
50														.054 .013 4 .048 .064 .074						.046 .026 10 .036 .071 .093						.048 .023 14 .039 .075 .092			50
60																													60
70	.050 .024 25 .041 .070 116										.089 1															.051 .025 26 .042 .072 116			70
80	.036 .011 4 .033 .044 .053													.044 .019 2 .044 .057 .062			.067 .054 27 .052 .094 206									.062 .051 33 .051 .093 206			80
90S																							.057 .031 19 .050 .083 125			.050 .031 19 .050 .083 125			90S
15E	60E	105E	150E	165W	120W	75W	30W	15E																					
LONGITUDE																													

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

WINTER  
FL 290

MEAN																		LAT									
90N																		90N									
80																		80									
70										.109 .095	.062 170	.153 277	.098 .083	.057 148	.16 207		.108 .095	.062 165	.169 274	70							
60									.079 .077	.037 112	.18 158					.134 134	.007 139	.2 141	.084 .078	.039 126	.20 158	60					
50										.076 .057	.052 121	.241 225	.094 .071	.062 164	.183 238	.082 .064	.099 115	.221 223	.083 .063	.074 128	.645 234		50				
40	.068 .061	.036 .088	.34 166			.098 .084	.051 162	.603 203		.032 .031	.014 041	.37 076	.067 .047	.053 108	.247 238	.089 .062	.093 132	.225 340	.055 .045	.037 .077	.708 176	.065 .040	.056 098	.1312 229	40		
30	.050 .048	.025 .063	.32 113			.073 .059	.050 101	.126 237		.062 .049	.062 074	.21 241	.059 .045	.057 081	.284 236	.049 .049	.004 051	.2 052	.053 .049	.027 .076	.72 127	.061 .049	.051 086	.537 222	30		
20	.055 .055	.023 078	.16 103	.059 048	.076 065	.41 212	.050 .054	.018 066	.10 080	.087 .087	.039 114	.2 124	.042 .041	.019 055	.30 075	.046 .043	.019 060	.27 094	.028 .028	.012 041	.34 050		.046 031	.043 063	.160 107	20	
10				.052 .051	.022 070	.54 099	.038 .038	.022 055	.8 074	.052 .052	.021 065	.2 071	.036 .032	.015 052	.26 071	.041		1				.046 .046	.021 069	.91 088		10	
0				.036 .030	.018 055	.22 079				.084		1				.029 .027	.010 041	.24 046				.033 .029	.017 045	.47 085		0	
10							.026 .026	.007 031	.6 035	.056 .053	.024 080	.6 091										.041 .026	.023 060	.12 089		10	
20							.033 .025	.016 048	.7 058	.026 .020	.020 042	.3 052	.035		1							.031 .025	.017 049	.11 059		20	
30	.061		1				.018 .018	.003 019	.2 020	.045 .042	.014 054	.6 071										.041 .041	.018 058	.9 071		30	
40				.054		1	.057 .051	.034 076	.174 183	.055 .050	.025 082	.23 110				.050 .031	.029 072	.3 089				.056 .050	.033 077	.201 176		40	
50										.056 .053	.014 066	.4 077							.051 .039	.028 079	.10 096		.052 .042	.025 078	.1 C-5	50	
60																										60	
70	.066 .052	.041 .096	.25 167				.119 119	.102 188	.2 217														.070 .052	.050 098	.27 196		70
80	.063 .050	.038 092	.4 123							.100 100	.065 144	.2 162				.106 086	.085 142	.27 334					.101 .084	.081 142	.33 320		80
90S																			.116 141	.065 179	.19 209		.116 141	.065 179	.19 209	90S	
	15E	60E	105E	150E	165W	120W	75W	30W	15E																		
	LONGITUDE																										

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

WINTER  
FL 310

	MEAN										LAT
90N											90N
80											80
70						.159 .083 .153	.162 .081 .16			.133 .083 .169	70
60						.132 .243 .327	.165 .244 .283			.135 .244 .327	60
50											50
40											40
30											30
20											20
10											10
0											0
10											10
20											20
30											30
40											40
50											50
60											60
70											70
80											80
90S											90S
15E	60E	105E	150E	165W	120W	75W	30W	15E			
LONGITUDE											

CODE:

MEAN ST. DEV.

N

50% 84%

98%

WINTER  
FL 330

[illegible]

CODE:

MEAN ST. DEV.

N

50%

84%

98%

WINTER  
FL 350

		MEAN												LAT	
														90N	
90N															
80															
70															
60															
50															
40															
30															
20															
10															
0															
10															
20															
30															
40															
50															
60															
70															
80															
90S															
	15E	60E	105E	150E	165W	120W	75W	30W	15E						
	LONGITUDE														

MEAN	ST. DEV.	N
50%	84%	98%

[illegible]

CODE: MEAN ST. DEV. N  
50% 84% 98%

WINTER  
FL 390

	MEAN										LAT
90N											90N
80											80
70											70
60											60
50											50
40											40
30											30
20											20
10											10
0											0
10											10
20											20
30											30
40											40
50											50
60											60
70											70
80											80
90S											90S
	15E	60E	105E	150E	165W	170W	75W	30W	15E		
	LONGITUDE										

MEAN	ST. DEV.	N
50%	84%	98%

LAT																		MEAN																		LAT																																																																																																																													
90N																			701 1																																				90N																																																																																																										
80																																																							80																																																																																																										
70																																					681 .279 152 626 .950 1 308 .773 264 16 .758 980 1 255																		70																																																																																																										
60																			230 1																		618 .267 32 629 846 1 187 638 .124 5 657 .740 760																		60																																																																																																										
50																			674 312 163 638 1 008 1 309 .460 .266 54 435 .699 .974 512 223 355 511 730 1 007 .538 252 209 .518 784 1 152 .409 .220 210 372 .620 967 498 261 991 498 778 1 158																		50																																																																																																																												
40	170 .071 2 170 217 237																		517 .250 120 498 .780 1 037 .558 281 144 526 644 1 173 .321 .219 161 300 .535 804 .379 255 424 316 659 952 .395 282 222 356 654 1 232 .335 .204 713 306 .534 863 382 249 1786 305 633 1 028																		40																																																																																																																												
30	229 .174 71 167 407 672																		210 .174 184 142 .387 653 .339 192 25 332 .537 716 .266 .204 150 198 485 694 239 208 285 172 408 859 .172 408 859																		30																																																																																																																												
20	072 037 25 075 096 161																		074 046 46 063 094 211 037 .020 16 034 .049 .085 0 000 0.000 0 000 0 000 0.000 0 000 .095 .084 66 074 .150 294 .076 049 30 075 094 189 .044 .020 34 043 .068 080																		20																																																																																																																												
10																			081 046 46 068 121 211 024 .020 29 018 .040 .074 .002 .002 3 002 .004 .005 .039 .073 116																		10																																																																																																																												
0	050 1																		069 .055 17 058 124 194 024 .013 17 024 037 047 .026 009 4 029 034 036 .027 .010 20 024 041 045 .037 .016 21 034 046 075																		0																																																																																																																												
10																			045 032 24 037 070 132 .030 .006 4 032 .035 036																		10																																																																																																																												
20																			033 015 25 027 .053 062 .037 .016 6 034 045 065																		20																																																																																																																												
30																			079 .056 22 048 .151 174 .074 1																		30																																																																																																																												
40																			137 .081 164 116 220 349 .160 072 45 145 235 318 .169 173 3 061 300 399																		40																																																																																																																												
50																			163 069 4 164 231 235 .218 090 10 233 303 324																		50																																																																																																																												
60																																					60																																																																																																																												
70	475 090 25 478 578 622																		514 1																		70																																																																																																																												
80	409 072 4 429 .470 481																		496 135 2 496 .588 626 623 180 27 644 816 910																		80																																																																																																																												
90S																																					625 .190 19 610 804 906 625 180 19 618 804 956																		90S																																																																																																										
15E																		60E																		105E																		150E																		165W																		120W																		75W																		30W																		15E																	
LONGITUDE																																																																																																																																																																	



CODE: MEAN ST. DEV. N  
50% 84% 98%

WINTER  
FL 430

	MEAN										LAT
90N											90N
80											80
70											70
60											60
50											50
40											40
30											30
20											20
10											10
0											0
10											10
20											20
30											30
40											40
50											50
60											60
70											70
80											80
90S											90S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

WINTER  
FL 450

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

WINTER  
FL 470

MEAN										LAT
90N										90N
80										80
70						1.262 .455 .152 1.202 1.717 2.347	1.429 .379 .16 1.371 1.757 2.229		1.278 .451 .168 1.202 1.722 2.382	70
60					1.112 .346 .18 .981 1.534 1.716				1.112 .346 .18 .981 1.534 1.716	60
50						.804 .377 .241 .746 1.157 1.671	.901 .438 .184 .832 1.327 1.950	.700 .357 .199 .605 1.086 1.472	.799 .398 .624 .669 1.206 1.746	50
40			.823 .351 .63 .832 1.184 1.597		479 .324 .34 431 .676 1.346	.506 .306 .223 .452 .788 1.321	607 .338 .186 553 .921 1.504	.564 .327 .708 .497 .891 1.392	.571 .333 .1214 .413 .902 1.457	40
30			.259 .242 .120 .159 .468 .908			.337 .281 .252 .258 .539 1.217		.405 .221 .70 .378 .602 .978	.326 .266 .442 .222 .540 1.082	30
20		.136 .099 .34 .109 .230 .365				.104 .038 .27 .102 .142 .178	.059 .029 .34 .058 .076 .124		.100 .073 .95 .080 .152 .340	20
10		.116 .071 .39 .103 .167 .284			.125 .041 .2 .125 .153 .164				.116 .070 .41 .103 .167 .281	10
0		.137 .096 .12 .130 .202 .358				.048 .017 .21 .046 .062 .077			.080 .074 .33 .056 .132 .282	0
10				.118 .044 .6 .116 .149 .193					.118 .044 .6 .116 .149 .193	10
20										20
30										30
40			.193 .118 .164 .171 .324 .466			.232 .019 .3 .222 .246 .257			.194 .117 .167 .172 .321 .466	40
50				.322 .090 .4 .279 .387 .465			.335 .101 .10 .372 .425 .465		.331 .098 .14 .333 .428 .472	50
60										60
70	.847 .251 .25 .879 1.142 1.290		.741 .1						.843 .247 .26 .847 1.133 1.290	70
80	.778 .209 .4 .714 .954 1.096			.684 .086 .2 .684 .742 .767		.857 .246 .27 .881 1.075 1.304			.837 .240 .33 .802 1.077 1.271	80
90S								1.153 .350 .19 1.129 1.464 1.945	1.153 .350 .19 1.129 1.464 1.945	90S
15E	60E	105E	150E	165W	120W	75W	30W	15E		
LONGITUDE										

MEAN	ST. DEV.	N
50%	84%	98%

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

WINTER  
FL 510

	MEAN								LAT
90N									90N
80									80
70					1.725 .572 150	1.963 .427 .16		1.748 .564 166	70
60				1.505 .540 .18	1.733 2.292 2.857	1.965 2.354 2.713		1.679 2.323 2.847	60
50				1.461 2.044 2.559				1.505 .540 .18	50
40					1.109 .435 .240	1.188 .545 .184	.938 .426 .199	1.078 .478 .623	40
30			1.116 .393 .62		.587 .283 .34	.720 .430 .223	.847 .446 .186	.766 .420 .708	30
20			1.060 1.520 1.877		.541 .853 1.231	.630 1.125 1.862	.786 1.289 1.939	.674 1.185 1.822	20
10			.398 .348 .119					.620 .305 .70	10
0			266 .685 1.478					.568 .960 1.230	0
10		.196 .154 .34						.481 .357 .441	10
20		.152 .284 .592						.384 .804 1.461	20
30		.153 .096 .39							30
40		.145 .203 .395							40
50		.182 .130 .12							50
60		.174 .255 .481							60
70									70
80									80
90S									90S
80									80
70									70
60									60
50									50
40									40
30									30
20									20
10									10
0									0
10									10
20									20
30									30
40									40
50									50
60									60
70									70
80									80
90S									90S
15E	60E	105E	150E	165W	120W	75W	30W	15E	
LONGITUDE									

MEAN	ST. DEV.	N
50%	84%	98%

		MEAN										LAT
90N												90N
80												80
70												70
60												60
50												50
40												40
30												30
20												20
10												10
0												0
10												10
20												20
30												30
40												40
50												50
60												60
70												70
80												80
90S												90S
15E	60E	105E	150E	165W	120W	75W	30W	15E				

MEAN	ST. DEV.	N
50%	84%	98%

WINTER  
FL 550

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98

WINTER  
FL 570

[illegible]



MEAN	ST. DEV.	N
50%	84%	98%

WINTER  
FL 590

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SPRING  
FL 190

															MEAN										LAT								
90N																									90N								
80																									80								
70													.054 .015 179 .053 .065 .091				.043 .022 25 .040 .057 .103								.053 .016 204 .032 .065 .100				70				
60									.041 .017 31 .037 .058 .079																.041 .017 31 .037 .058 .079				60				
50													.052 .016 197 .052 .066 .079				.057 .020 198 .056 .072 .093				.061 .021 225 .060 .081 .108				.057 .020 620 .055 .074 .101				50				
40	.060 .012 2 .060 .067 .071				.062 .016 59 .059 .077 .102				.042 .020 50 .039 .064 .085				.050 .017 255 .050 .064 .086				.055 .018 184 .056 .070 .094				.051 .015 695 .051 .064 .084				.052 .017 1245 .051 .065 .089				40				
30					.062 .021 135 .059 .076 .117				.058 .029 4 .069 .082 .084				.050 .021 290 .049 .071 .097								.059 .028 113 .052 .077 .156				.055 .023 542 .053 .074 .109				30				
20					.049 .014 34 .050 .060 .078				.057 1				.060 .020 5 .058 .079 .089				.053 .012 40 .052 .067 .077				.045 .017 33 .042 .063 .083								.050 .015 113 .049 .064 .084				20
10	.038 .012 23 .039 .047 .059				.047 .001 2 .047 .048 .046				.048 .030 4 .045 .072 .090				.035 .002 2 .035 .036 .037				.053 .028 3 .064 .075 .079								.041 .017 34 .037 .050 .084				10				
0	.024 .012 9 .022 .039 .046												.033 .016 43 .031 .051 .063												.031 .016 52 .027 .050 .062				0				
10									.011 .008 9 .010 .017 .026																.011 .008 9 .010 .017 .026				10				
20									.020 1				.038 1								.330 .446 3 .022 .661 .923								.209 376 5 .022 370 .887				20
30																																	30
40					.035 .011 158 .032 .044 .061				.034 1																.035 .011 159 .032 .044 .061				40				
50									.036 .017 2 .036 .048 .052				.021 1								.017 .003 5 .016 .020 .021								.022 .012 8 .017 .021 .049				50
60													.041 1				.025 .007 2 .025 .030 .032				.023 1				.015 1				.026 .010 5 .023 .035 .040				60
70	.034 .007 18 .033 .040 .051				.006 1				.006 1				.030 .005 2 .030 .033 .034												.031 .011 22 .032 .038 .050				70				
80	.023 .003 4 .024 .028 .026								.027 .003 9 .027 .030 .032								.030 .011 24 .027 .043 .053												.028 .009 37 .026 .038 .051				80
90S																									.030 .017 29 .025 .049 .067				.030 .017 29 .025 .049 .067				90S
		15E	60E	105E	150E	165W	120W	75W	30W	15E																							
															LONGITUDE																		

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

 SPRING  
 FL 210

	MEAN										LAT
											90N
80											80
70						.061 .023 179 .057 .075 126	.046 .024 25 .042 .061 106			.059 .024 204 .056 .075 124	70
60					.041 .016 31 .039 .057 076					.041 .016 31 .039 .057 076	60
50						.056 .020 197 .055 .069 120	.061 .021 198 .061 .077 104	.065 .023 240 .064 .085 113		.061 .022 635 .059 .078 115	50
40	.071 .008 3 .067 .077 .081		.066 .018 59 .062 .080 119		.049 .029 59 .043 .069 134	.052 .019 291 .052 .067 102	.058 .022 214 .058 .074 115	.053 .017 698 .051 .066 093		.054 .019 1324 .045 .069 106	40
30	.044 .016 6 .040 .064 .065		.064 .021 149 .060 .079 124		.065 .040 24 .055 .083 175	.054 .038 329 .054 .073 101	.042 1	.061 .029 113 .054 .080 145		.058 .033 622 .055 .078 123	30
20	.034 1	.052 .015 37 .053 .065 .081	.061 .019 5 .062 .080 .083		.059 .025 50 .060 .079 122	.053 .013 43 .054 .066 079	.045 .019 33 .043 .064 .088			.053 .020 169 .052 .072 095	20
10		.041 .014 26 .043 .054 .067	.053 .016 5 .053 .069 075		.030 .012 6 .029 .041 .046	.036 .007 6 .038 .041 .043	.028 .019 6 .029 .039 .058			.038 .015 49 .039 .053 .067	10
0		.026 .014 10 .025 .044 .047				.033 .015 44 .029 .047 .065				.032 .015 54 .029 .047 .063	0
10				.010 .005 9 .008 .017 .018						.010 .005 9 .008 .017 .018	10
20			.025 1	.025 1				.277 .371 3 .023 .553 .771		.176 .313 5 .025 .305 .740	20
30								.019 .010 6 .020 .027 .033		.019 .010 6 .020 .027 .033	30
40			.035 .011 159 .033 .044 .068	.040 .036 9 .030 .037 122						.035 .014 168 .033 .044 .069	40
50				.033 .017 2 .033 .045 .049	.018 1		.022 .009 5 .019 .027 .038			.024 .012 8 .018 .037 .048	50
60					.029 1	.029 .009 2 .029 .035 .038	.032 1	.015 1		.027 .008 5 .029 .034 .038	60
70	.040 .011 18 .037 .051 .060		.008 1		.006 1	.032 .004 2 .032 .034 .035				.036 .014 22 .034 .048 .060	70
80	.026 .001 4 .026 .027 .028			.028 .006 9 .029 .035 .037		.032 .012 24 .029 .044 .056				.030 .010 37 .029 .041 .055	80
90S									.032 .018 29 .028 .047 .074	.032 .018 29 .028 .047 .074	90S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SPRING  
FL 230

[illegible]

MEAN	ST. DEV.	N
50°	84%	98%

MEAN

[illegible]

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SPRING  
FL 270

[illegible]

CODE:

MEAN ST. DEV.

N

50%

84%

98%

SPRING  
FL 290

	MEAN								LAT
90N									90N
80									80
70									70
60									60
50									50
40									40
30									30
20									20
10									10
0									0
10									10
20									20
30									30
40									40
50									50
60									60
70									70
80									80
90S									90S
15E	60E	105E	150E	165W	120W	75W	30W	15E	
LONGITUDE									

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SPRING  
FL 310

[illegible]



CODE:

MEAN ST. DEV. N

50% 84% 98%

SPRING  
FL 330

	MEAN										LAT
90N											90N
80											80
70											70
60											60
50											50
40											40
30											30
20											20
10											10
0											0
10											10
20											20
30											30
40											40
50											50
60											60
70											70
80											80
90S											90S
15E	60E	105E	150E	165W	120W	75W	30W	15E			
LONGITUDE											

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SPRING  
FL 350

										MEAN									LAT
90N																			90N
80																			80
70																			70
60																			60
50																			50
40																			40
30																			30
20																			20
10																			10
0																			0
10S																			10S
20S																			20S
30S																			30S
40S																			40S
50S																			50S
60S																			60S
70S																			70S
80S																			80S
90S																			90S

MEAN	ST. DEV.	N
50%	84%	98%

MEAN

90N

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SPRING  
FL 390

										MEAN									LAT
90N																			90N
80																			80
70																			70
60																			60
50																			50
40																			40
30																			30
20																			20
10																			10
0																			0
10S																			10S
20S																			20S
30S																			30S
40S																			40S
50S																			50S
60S																			60S
70S																			70S
80S																			80S
90S																			90S

MEAN	ST. DEV.	N
50%	84%	98%

SPRING  
FL 410

											MEAN										LAT
90N																					90N
80																					80
70																					70
60																					60
50																					50
40																					40
30																					30
20																					20
10																					10
0																					0
10S																					10S
20S																					20S
30S																					30S
40S																					40S
50S																					50S
60S																					60S
70S																					70S
80S																					80S
90S																					90S

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SPRING  
FL 430

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SPRING  
FL 450

		MEAN											
90N												90N	
80												80	
70								1.120 .368 .179	1.074 .261 .25		1.114 .357 .204	70	
60								1.087 1.479 1.900	1.085 1.335 1.533		1.056 1.475 1.887	60	
50											931 .421 .31	50	
40											924 1.381 1.748	40	
30								798 .366 .196	796 .309 .196	680 .274 .221	755 .322 .613	30	
20								766 1.144 1.611	775 1.117 1.429	665 .923 1.354	733 1.075 1.493	20	
10												10	
0												0	
10												10	
20												20	
30												30	
40												40	
50												50	
60												60	
70												70	
80												80	
90S												90S	
15E	60E	105E	150E	165W	120W	75W	30W	15E					
LONGITUDE													

MEAN	ST. DEV.	N
50%	84%	98%

SPRING  
FL 470

																MEAN			LAT
90N																			90N
80																			80
70																1.308 .489 179 1.186 1.822 2.314			70
60																1.204 .305 25 1.233 1.501 1.681			60
50																			50
40																1.150 .485 31 1.130 1.652 2.054			40
30																			30
20																.865 .415 196 .774 1.249 1.987			20
10																.861 .374 196 .784 1.313 1.669			10
0																.769 .344 221 .720 1.095 1.594			0
10																.829 .380 613 .754 1.212 1.731			10
20																			20
30																.684 .336 720 .651 .975 1.534			30
40																.595 .287 246 .547 .853 1.380			40
50																.621 .314 178 .536 .941 1.356			50
60																			60
70																.408 .315 288 .327 .665 1.323			70
80																.606 .321 113 .585 .959 1.153			80
90S																.433 .321 535 .352 .756 1.239			90S
80																			80
70																.176 .110 39 .142 .234 .494			70
60																.098 .048 33 .085 .152 .226			60
50																			50
40																.113 .085 25 .099 .166 .345			40
30																.094 .168 51 .059 .110 .205			30
20																.042 .013 9 .039 .056 .066			20
10																			10
0																.635 .822 3 .084 1.249 1.728			0
10																			10
20																			20
30																			30
40																.229 .141 158 .191 .354 .621			40
50																.200 .074 2 .200 .250 .271			50
60																.226 1			60
70																.381 1			70
80																.509 .058 2 .509 .548 .565			80
90S																.330 1			90S
80																.626 1			80
70																.471 .111 5 .451 .588 .621			70
60																			60
50																.772 .280 22 .815 1.017 1.242			50
40																.788 .274 37 .767 1.033 1.346			40
30																			30
20																.921 .181 29 .950 1.095 1.188			20
10																.921 .181 29 .950 1.095 1.188			10
0																			0
10																			10
20																			20
30																			30
40																			40
50																			50
60																			60
70																			70
80																			80
90S																			90S
15E	60E	105E	150E	165W	120W	75W	30W	15E											
									LONGITUDE										



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SPRING  
FL 490

	MEAN										LAT
90N											90N
80											80
70						1.502 .540 179 1.480 2.096 2.616	1.392 .485 25 1.497 1.840 2.276			1.489 .535 204 1.410 2.050 2.563	70
60					1.302 .539 31 1.280 1.934 2.118					1.302 .539 31 1.280 1.934 2.118	60
50						977 .473 197 904 1.411 2.121	991 .434 196 927 1.425 1.972	.894 .406 221 .818 1.248 1.951		.952 .440 614 .866 1.345 2.028	50
40			.996 .478 58 .950 1.465 1.940		.931 .370 50 .910 1.367 1.529	681 .329 246 628 .968 1.573	715 .334 178 660 1.015 1.554	.771 .395 720 .722 1.103 1.825		762 .385 1252 587 1.099 1.789	40
30			.382 .304 134 .259 .647 1.175			437 .341 288 328 .702 1.556		.675 .375 112 .598 1.062 1.584		.473 .356 534 .372 .792 1.541	30
20		.175 .082 32 .167 .254 .355				218 .176 40 148 .374 682	.115 .058 33 103 .162 .282			.173 .129 105 .129 .248 .617	20
10		.138 .098 22 .116 .205 397			.071 .042 3 060 .106 .124					.130 .096 25 .111 .200 .389	10
0		.142 .053 9 .149 .192 .233				.098 .219 42 064 .095 426				.106 .200 51 066 .114 239	0
10S				.047 .018 9 045 .062 .082						.047 .018 9 045 .062 .082	10S
20S							1.151 1.517 3 .122 2.280 3.169			1.151 1.517 3 .122 2.280 3.169	20S
30S											30S
40S			.281 .182 157 228 .412 .819							.281 .182 157 228 .412 .819	40S
50S				.223 .125 2 223 .308 .343	.220 1		.330 .149 5 .315 .455 569			.290 .143 8 249 .378 557	50S
60S					.560 1	.662 .137 2 662 .755 794	.480 1	.830 1		.639 .146 5 560 .810 828	60S
70S	1.014 .299 18 1.024 1.251 1.599		1.463 1		.436 1	.529 .007 2 .528 .532 534				.964 .342 22 967 1.270 1.589	70S
80S	.841 .287 4 .853 1.116 1.183			1.013 .408 9 1.093 1.275 1.793		.954 .319 24 911 1.173 1.701				.956 .343 37 920 1.213 1.840	80S
90S									1.082 .185 29 1.110 1.261 1.352	1.082 .185 29 1.110 1.261 1.352	90S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

MEAN	ST. DEV.	N
50%	84%	98%

[illegible]

CODE: MEAN ST. DEV. N  
50% 84% 98%

SPRING  
FL 530

	MEAN								LAT
90N									90N
80						2.009 .634 .177 1.931 2.761 3.407	1.881 .556 .25 1.811 2.371 3.186		80
70								1.993 .626 .202 1.878 2.682 3.468	70
60					1.727 .522 .31 1.804 2.139 2.782			1.727 .522 .31 1.804 2.139 2.782	60
50						1.375 .637 .194 1.255 1.987 2.872	1.357 .504 .195 1.309 1.860 2.439	1.169 .433 .221 1.102 1.557 2.230	50
40			1.296 .634 .58 1.209 1.940 2.742		1.203 .511 .50 1.149 1.853 2.368	.877 .444 .246 1.788 1.314 2.027	1.014 .422 .178 1.934 1.461 2.163	1.047 .481 .719 1.995 1.432 2.276	40
30			.531 .369 .133 1.434 .864 1.554			.626 .392 .288 1.543 .975 1.712		1.907 .412 .112 1.879 1.348 1.673	30
20		227 .121 .32 218 .310 .532				.293 .210 .40 1.223 .434 .789	.175 .100 .33 1.141 .215 .449	.236 .164 .105 1.193 .354 .645	20
10		184 .121 .22 148 .293 .483			.092 .050 .3 079 .133 .156			.173 .118 .25 1.137 .285 .476	10
0		185 .074 .9 169 .255 .301				.122 .289 .42 1.081 .117 .462		.133 .265 .51 1.086 .130 .309	0
10				.089 .032 .9 087 .128 .128				.089 .032 .9 1.087 .128 .128	10
20							.156 .078 .3 1.186 .217 .230	.156 .078 .3 1.186 .217 .230	20
30									30
40			.447 .231 .158 1.407 .642 1.072					.447 .231 .158 1.407 .642 1.072	40
50				.435 .061 .2 1.435 .476 .494	.620 1		.580 .154 .5 1.613 .698 .801	.549 .143 .8 1.485 .631 .790	50
60					.882 1	.869 .038 .2 1.869 .895 .905	.726 1	.852 .069 .5 1.882 .909 .913	60
70	1.522 .374 .18 1.563 1.854 2.244		2.180 1		1.366 1	.697 .040 .2 1.697 .724 .735		1.470 .441 .22 1.487 1.859 2.278	70
80	1.094 .220 .4 1.161 1.289 1.299			1.279 .381 .9 1.274 1.578 1.938		1.420 .314 .24 1.354 1.786 1.944		1.351 .340 .37 1.318 1.738 2.007	80
90S								1.547 .166 .28 1.561 1.740 1.794	90S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
LONGITUDE									

**CODE:**

MEAN	ST. DEV.	N
50%	84%	98%

SPRING  
FL 550

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SPRING  
FL 570

	MEAN								LAT
90N									90N
80									80
70						2.617 .582 174 2.541 3.231 3.632	2.475 .605 25 2.380 3.043 3.688		70
60					2.383 .591 31 2.296 3.036 3.572			2.383 .591 31 2.296 3.036 3.572	60
50					1.948 .654 191 1.873 2.656 3.394	1.903 .590 195 1.829 2.544 3.269	1.659 .470 221 1.618 2.092 2.748	1.828 .586 607 1.752 2.415 3.256	50
40		1.694 .679 58 1.571 2.342 3.394		1.768 .518 50 1.826 2.254 2.758	1.334 .443 246 1.305 1.722 2.375	1.424 .507 178 1.328 1.931 2.654	1.522 .541 723 1.447 1.956 2.868	1.469 .535 1255 1.419 1.962 2.790	40
30		.841 .489 133 .753 1.168 2.401			.981 .487 288 .891 1.454 1.964		1.325 .469 112 1.269 1.781 2.400	1.018 .512 533 1.941 1.549 2.308	30
20		.473 .254 32 .469 .660 1.011			.539 .317 40 .447 .730 1.295	.325 .162 33 .267 .450 .741		.451 .273 105 .384 .658 1.039	20
10		.388 .209 22 .377 .594 .812		.337 .144 3 .261 .449 .527				.382 .203 25 .372 .572 .806	10
0		.309 .195 9 .286 .360 .735			.208 .353 42 .149 .213 .700			.226 .332 51 .167 .267 .805	0
10S			.269 .056 9 .247 .328 340					.269 .056 9 .247 .328 340	10S
20S						1.087 1.338 3 1.199 2.089 2.868		1.087 1.338 3 1.199 2.089 2.868	20S
30S									30S
40S		.807 .302 158 .775 1.083 1.570						.807 .302 158 .775 1.083 1.570	40S
50S			.805 .019 2 .805 .817 .822	.908 1		.949 .235 5 .999 1.162 1.259		.908 .196 8 .766 1.088 1.249	50S
60S				1.667 1	1.217 .042 2 1.217 1.245 1.256	1.563 1	1.590 1	1.451 .196 5 1.563 1.618 1.661	60S
70S	2.014 .357 18 2.022 2.252 2.678	2.636 1		1.417 1	1.098 .236 2 1.098 1.258 1.324			1.932 .461 22 2.004 2.264 2.767	70S
80S	1.481 .062 2 1.481 1.522 1.540		1.612 .447 .8 1.605 1.986 2.277		1.886 .266 24 1.893 2.191 2.313			1.788 .342 34 1.807 2.165 2.319	80S
90S							1.978 .172 28 2.020 2.129 2.274	1.978 .172 28 2.020 2.129 2.274	90S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
LONGITUDE									

[illegible]

		MEAN										
90N												
80												80
70								2.901 .581 173	2.901 .530 25		2.901 .575 198	70
60								2.792 3.558 4.126	2.849 3.443 3.883		2.757 3.541 4.114	60
50											2.609 .422 31	50
40											2.625 3.045 3.260	40
30												30
20												20
10												10
0												0
10S												10S
20S												20S
30S												30S
40S												40S
50S												50S
60S												60S
70S												70S
80S												80S
90S												90S
15E	60E	105E	150E	165W	120W	75W	30W	15E				



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SUMMER  
FL 210

MEAN										LAT
90N										90N
80										80
70						.063 .026 151 .061 .077 111	.046 .018 30 .043 .063 .083		.060 .026 181 .058 .076 107	70
60					.049 .018 41 .045 .067 .083				.049 .018 41 .045 .067 .083	60
50						.055 .022 283 .055 .074 101	.060 .018 182 .060 .076 100	.067 .025 195 .063 .092 123	.060 .023 660 .054 .081 116	50
40	.061 .010 4 .058 .068 076		.076 .023 53 .079 .096 130		.047 .022 35 .047 .073 091	.053 .021 203 .050 .075 099	.062 .022 127 .064 .084 100	.062 .032 596 .061 .076 100	.060 .029 1018 .056 .079 102	40
30	.052 .020 20 .051 .072 085		.057 .030 75 .054 .080 136		.036 .026 23 .030 .044 102	.059 .024 269 .058 .084 113		.067 .021 83 .068 .088 107	.059 .025 470 .056 .084 114	30
20	.088 .019 2 .088 .100 105	.039 .023 26 .032 .066 087	.034 .018 7 .044 .050 054		.030 .014 27 .029 .042 059	.063 .018 32 .064 .075 099	.057 .021 35 .057 .077 101		.048 .024 129 .049 .071 102	20
10		.036 .017 48 .037 .052 070			.030 .013 14 .029 .045 052				.034 .016 62 .032 .050 068	10
0		.038 .018 32 .033 .061 078				.045 .091 90 .034 .051 067			.043 .078 122 .033 .053 074	0
10				.014 .004 9 .015 .020 021			.063 .006 2 .063 .067 069		.023 .019 11 .015 .035 066	10
20			.028 .007 3 .026 .033 037	.018 .009 12 .016 .028 033			.019 .007 5 .018 .025 026		.020 .009 20 .017 .027 036	20
30				.021 1					.021 1	30
40			.037 .009 198 .037 .046 058	.034 .015 19 .036 .049 058					.037 .010 217 .037 .047 059	40
50				.043 .009 11 .043 .048 059		.072 1	.021 .007 6 .020 .026 031		.037 .016 18 .038 .048 059	50
60						.042 1			.042 1	60
70	.040 .007 25 .039 .047 056		.036 1						.040 .007 26 .039 .046 056	70
80	.027 .006 4 .026 .032 033			.034 .014 4 .031 .046 052		.033 .015 27 .032 .044 067			.033 .014 35 .032 .014 064	80
90S								.034 .017 26 .029 .050 072	.034 .017 26 .027 .050 072	90S
	15E	60E	105E	150E	165W	170W	75W	30W	15E	
LONGITUDE										



CODE:

MEAN ST. DEV. N

50% 84% 98%

SUMMER  
FL 230

	MEAN										LAT
90N											90N
80											80
70						.068 .030 151	.049 .020 30			.065 .029 181	70
60					.051 .023 42					.051 .023 42	60
50					.049 .068 103					.048 .068 103	50
40	.075 .005 3		.077 .024 53		.045 .020 33	.053 .023 195	.065 .021 113	.064 .026 588		.062 .025 985	40
30	.065 .020 5		.061 .031 72		.041 .017 8	.062 .025 256	.037 1	.069 .022 83		.063 .026 426	30
20	.068 .080 .094		.057 .082 141		.046 .052 67	.060 .089 113		.070 .089 116		.060 .088 123	20
10		.042 .021 22	.036 1		.054 .015 10	.067 .022 32	.058 .023 35			.057 .024 100	10
0		.042 .061 .077			.058 .063 .078	.064 .082 116	.059 .074 112			.048 .076 107	0
10S		.038 .016 43	.021 .011 3		.033 .010 7					.036 .015 53	10S
20S		.037 .054 .070	.014 .030 .036		.027 .047 .048					.036 .052 .068	20S
30S		.042 .020 29									30S
40S		.037 .064 .083				.039 .031 90				.040 .028 119	40S
50S						.034 .050 .070				.035 .053 .079	50S
60S				.014 .003 9			.061 .005 2			.022 .018 11	60S
70S				.014 .017 .019			.061 .064 .065			.015 .034 .063	70S
80S				.030 .001 2			.021 .006 5			.024 .006 7	80S
90S				.030 .030 .030			.021 .026 .030			.023 .030 .031	90S
				.078 1						.078 1	
		.040 .011 191	.049 .028 10				.038 1			.040 .012 202	
		.038 .050 .068	.045 .072 100							.038 .051 .071	
			.047 .008 9			.077 1	.022 .008 6			.040 .017 16	
			.047 .051 .063				.021 .031 .035			.039 .051 .073	
						.046 1				.046 1	
	.043 .009 25		.036 1							.043 .009 25	
	.041 .052 .062									.041 .052 .062	
	.028 .008 4			.036 .015 4		.035 .014 27				.034 .014 35	
	.030 .034 .034			.036 .051 .054		.033 .046 .061				.033 .047 .061	
								.035 .017 26		.035 .017 26	
								.029 .052 .075		.029 .052 .075	
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

MEAN	ST. DEV.	N
50%	84%	98%

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SUMMER  
FL 270

	MEAN										LAT
90N											90N
80											80
70											70
60											60
50											50
40	.083 .021 6 .085 .104 106		.063 .029 53 .084 .114 137		.052 .026 33 .050 .082 103	.064 .032 281 .061 .091 152	.076 .039 182 .069 .095 186	.080 .036 192 .072 .110 170	.072 .036 655 .067 .099 168	.071 .027 593 .062 .092 149	40
30	.074 .025 17 .071 .103 118		.060 .026 76 .060 .081 113		.054 .028 13 .054 .069 113	.071 .040 256 .068 .098 144	.072 1	.074 .024 83 .070 .096 128	.069 .035 446 .065 .096 132	.056 .026 111 .055 .081 108	30
20	.066 .011 2 .066 .073 077	.043 .029 26 .037 .070 100	.060 .023 3 .067 .079 083		.042 .019 11 .044 .061 071	.069 .020 34 .070 .084 105	.058 .026 35 .054 .074 124				20
10		.035 .018 68 .033 .050 077	.033 .013 3 .031 .044 049		.039 .016 10 .039 .055 069	.075 .010 3 .070 .082 087	.044 1		.037 .019 85 .034 .055 081		10
0		.047 .024 29 .046 .072 094				.040 .016 89 .038 .055 072			.041 .018 118 .038 .057 090		0
10			.029 1	.014 .005 9 .014 .018 022			.063 .004 2 .063 .066 067		.024 .019 12 .016 .036 065		10
20				.029 .012 4 .023 .037 048			.027 .003 5 .028 .030 031		.028 .008 9 .026 .030 046		20
30							.043 .013 3 .038 .053 059		.043 .013 3 .038 .053 059		30
40			.049 .024 192 .042 .058 114	.058 .031 5 .048 .090 101					.049 .024 197 .042 .059 113		40
50				.051 .010 9 .051 .059 059		.073 1	.037 .018 6 .041 .049 064		.047 .016 16 .044 .064 072		50
60						.055 1			.055 1		60
70	.050 .010 25 .047 .057 073		.036 1						.049 .011 26 .047 .057 071		70
80	.031 .011 4 .033 .041 041			.041 .017 4 .038 .057 064		.044 .024 27 .048 .053 105			.042 .023 35 .040 .053 095		80
90S								.038 .018 26 .031 .051 084	.038 .018 26 .031 .051 084		90S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
LONGITUDE											

CODE: MEAN ST. DEV. N  
50% 84% 98%

SUMMER  
FL 290

	MEAN										LAT
											90N
80											80
70						.125 .090 .151	.123 .100 .30			.125 .092 .181	70
60						.092 .200 .361	.085 .197 .402			.091 .202 .379	60
50								.103 .025 .6	.072 .009 .3	.082 .046 .51	50
40								.102 .124 .140	.066 .079 .084	.071 .128 .179	40
30										.082 .053 .681	30
20										.071 .110 .266	20
10										.082 .053 .681	10
0										.071 .110 .266	0
10										.082 .053 .681	10
20										.071 .110 .266	20
30										.082 .053 .681	30
40										.071 .110 .266	40
50										.082 .053 .681	50
60										.071 .110 .266	60
70										.082 .053 .681	70
80										.071 .110 .266	80
90S										.082 .053 .681	90S

MEAN	ST. DEV.	N
50%	84%	98%

SUMMER  
FL 310

[illegible]

MEAN	ST. DEV.	N
50%	84%	98%

SUMMER  
FL 330

[illegible]

MEAN	ST. DEV.	N
50%	84%	98%

SUMMER  
FL 350

MEAN																		LAT
90N																		90N
80																		80
70																		70
60																		60
50																		50
40																		40
30																		30
20																		20
10																		10
0																		0
10																		10
20																		20
30																		30
40																		40
50																		50
60																		60
70																		70
80																		80
90S																		90S
15E	60E	105E	150E	165W	120W	75W	30W	15E										

MEAN	ST. DEV.	N
50%	84%	98%

[illegible]



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SUMMER  
FL 390

	MEAN									LAT
90N										90N
80										80
70										70
60										60
50										50
40										40
30										30
20										20
10										10
0										0
10										10
20										20
30										30
40										40
50										50
60										60
70										70
80										80
90S										90S
	15E	60E	105E	150E	165W	120W	75W	30W	15E	
	LONGITUDE									

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SUMMER  
FL 430

		MEAN										LAT
90N												90N
80												80
70												70
60												60
50												50
40												40
30												30
20												20
10												10
0												0
10												10
20												20
30												30
40												40
50												50
60												60
70												70
80												80
90S												90S
	15E	60E	105E	150E	165W	120W	75W	30W	15E			
	LONGITUDE											

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SUMMER  
FL 470

		MEAN										LAT	
												90N	
80												80	
70												70	
60												60	
50												50	
40												40	
30												30	
20												20	
10												10	
0												0	
10												10	
20												20	
30												30	
40												40	
50												50	
60												60	
70												70	
80												80	
90S												90S	
15E	60E	105E	150E	165W	120W	75W	30W	15E					
LONGITUDE													

MEAN	ST. DEV.	N
50%	84%	98%

SUMMER  
FL 490

[illegible]

CODE:

MEAN ST. DEV. N

50% 84% 98%

SUMMER  
FL 510

90N											MEAN										LAT
80																					90N
70																					80
60																					70
50																					60
40																					50
30																					40
20																					30
10																					20
0																					10
10																					0
20																					10
30																					20
40																					30
50																					40
60																					50
70																					60
80																					70
90S																					80
15E	60E	105E	150E	165W	120W	75W	30W	15E											90S		
LONGITUDE																					

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

SUMMER  
FL 530

		MEAN												
90N														90N
80														80
70														70
60														60
50														50
40														40
30														30
20														20
10														10
0														0
10S														10S
20S														20S
30S														30S
40S														40S
50S														50S
60S														60S
70S														70S
80S														80S
90S														90S



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SUMMER  
FL 550

	MEAN								LAT
									90N
90N									
80						1.556 .209 .151	1.663 .199 .30	1.574 .211 .181	80
70						1.547 1.747 2.099	1.660 1.842 2.112	1.552 1.773 2.099	70
60				1.538 .310 .41				1.538 .310 .41	60
50				1.580 1.878 2.013				1.580 1.878 2.013	50
40					1.095 .331 .281	1.263 .280 .179	1.041 .231 .173	1.128 .305 .633	40
30					1.081 .393 1.952	1.231 1.519 1.996	1.020 1.254 1.489	1.112 .393 1.897	30
20									20
10									10
0									0
10S									10S
20S									20S
30S									30S
40S									40S
50S									50S
60S									60S
70S									70S
80S									80S
90S									90S
15E	60E	105E	150E	165W	120W	75W	30W	15E	
LONGITUDE									

MEAN	ST. DEV.	N
50%	84%	98%

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SUMMER  
FL 590

	MEAN								LAT
90N									90N
80						2.097 .200 148 2.082 2.282 2.506	2.268 .175 30 2.208 2.432 2.692	2.125 .206 178 2.073 2.318 2.620	80
70					2.161 .337 41 2.137 2.565 2.709			2.161 .337 41 2.137 2.565 2.709	70
60						1.619 .382 281 1.594 1.963 2.597	1.824 .292 178 1.783 2.094 2.521	1.526 .344 173 1.477 1.760 2.590	60
50			1.157 .330 52 1.169 1.453 1.850		1.587 .311 32 1.621 1.892 2.125	1.200 .240 171 1.181 1.446 1.747	1.390 .301 94 1.348 1.623 2.095	1.295 .258 578 1.261 1.516 1.885	50
40			.791 .266 65 .752 .990 1.370			1.094 .314 239 1.039 1.405 1.885		.996 .263 82 .962 1.243 1.645	40
30		.451 .183 20 .441 .593 759				.820 .212 32 .816 .999 1.296	.653 .132 35 .626 .768 940		30
20		.675 .319 40 .639 .922 1.475			.765 .164 7 .821 .889 950			.668 .225 87 .650 .878 1.164	20
10		.509 .219 27 .446 .700 979				.467 .138 89 .439 .537 862		.476 .161 116 .439 .635 869	10
0				.509 .129 9 .490 .654 679			.392 .074 2 .392 .441 462	.488 .129 11 .465 .647 678	0
10S							.637 .145 5 .653 .733 858	.637 .145 5 .653 .733 858	10S
20S									20S
30S			1.422 .400 180 1.433 1.803 2.257					1.422 .400 180 1.433 1.803 2.257	30S
40S				1.463 .273 8 1.389 1.774 1.937		1.446 1 1.610 1.778 1.826		1.507 .244 15 1.462 1.797 1.923	40S
50S						2.207 1		2.207 1	50S
60S	2.468 .444 25 2.395 2.840 3.352		2.043 1					2.452 .443 26 2.378 2.824 3.346	60S
70S	2.183 .294 4 2.199 2.444 2.550			2.118 .060 2 2.118 2.159 2.176		2.318 .315 27 2.332 2.657 2.919		2.289 .309 33 2.310 2.591 2.891	70S
80S								2.335 .403 23 2.484 2.665 2.821	80S
90S								2.335 .403 23 2.484 2.665 2.821	90S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
LONGITUDE									

**CODE:**

MEAN	ST. DEV.	N
50%	84%	98%

AUTUMN  
FL 190

[illegible]



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUTUMN  
FL 230

[illegible]

CODE:

MEAN ST. DEV. N

50% 84% 98%

AUTUMN

FL 250

												MEAN			LAT	
90N																90N
80																80
70																70
60																60
50																50
40																40
30																30
20																20
10																10
0																0
10																10
20																20
30																30
40																40
50																50
60																60
70																70
80																80
90S																90S
15E	60E	105E	150E	165W	120W	75W	30W	15E								
LONGITUDE																

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUTUMN  
FL 270

															MEAN			LAT						
90N																			90N					
80																			80					
70																			70					
60																			60					
50																			50					
40																			40					
30																			30					
20																			20					
10																			10					
0																			0					
10																			10					
20																			20					
30																			30					
40																			40					
50																			50					
60																			60					
70																			70					
80																			80					
90S																			90S					
15E	60E			105E			150E			165W			120W			75W			30W			15E		
LONGITUDE																								



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUTUMN  
FL 290

MEAN										LAT
90N										90N
80										80
70						.103 .063 .143 .083 .154 .258	.079 .049 .20 .065 .147 .174		.100 .062 .163 .080 .152 .256	70
60					.064 .028 .23 .063 .083 .131				.064 .028 .23 .063 .083 .131	60
50						.061 .039 .207 .050 .083 .167	.080 .052 .168 .058 .133 .227	.074 .067 .221 .062 .101 .186	.071 .055 .596 .056 .106 .206	50
40	.072 .028 .28 .069 .097 .141		.070 .023 .62 .066 .092 .125		.040 .019 .39 .037 .062 .082	.045 .028 .182 .037 .064 .141	.059 .035 .170 .051 .088 .170	.053 .044 .642 .046 .070 .149	.054 .039 .1123 .046 .074 .152	40
30	.054 .013 .20 .054 .063 .079	.055 1	.055 .021 .136 .052 .073 .099		.053 .038 .20 .043 .060 .159	.053 .029 .261 .048 .077 .132	.039 .005 .3 .038 .043 .045	.048 .026 .54 .045 .072 .115	.053 .026 .495 .049 .074 .122	30
20	.054 .013 .5 .057 .066 .072	.048 .020 .27 .051 .066 .087	.044 .019 .7 .044 .060 .068		.032 .016 .23 .032 .042 .067	.045 .015 .35 .044 .066 .072	.040 .015 .26 .038 .050 .073		.043 .018 .123 .042 .061 .076	20
10		.048 .019 .54 .047 .066 .096	.025 .010 .4 .023 .033 .040	.012 1	.026 .023 .14 .021 .034 .085	.026 1			.042 .022 .74 .040 .056 .099	10
0		.075 .083 .7 .041 .072 .251				.033 .014 .29 .031 .047 .060			.041 .042 .36 .032 .047 .127	0
10			.027 .007 .6 .024 .030 .041	.019 .013 .8 .018 .033 .041			.057 .008 .5 .057 .064 .068		.031 .019 .19 .024 .053 .066	10
20			.020 .002 .2 .020 .021 .022	.044 .035 .6 .042 .070 .101	.051 1		.026 .007 .2 .026 .031 .033		.037 .028 .11 .030 .057 .096	20
30		.078 1	.085 .011 .4 .081 .093 .102	.043 .021 .5 .048 .060 .073			.077 1		.064 .025 .11 .075 .080 .099	30
40			.068 .043 .210 .058 .083 .207	.057 .033 .14 .062 .090 .108		.027 1			.067 .043 .225 .058 .083 .198	40
50				.072 .030 .10 .068 .090 .128	.075 1	.029 1	.084 1		.069 .029 .13 .071 .087 .125	50
60					.036 1	.065 1			.051 .015 .2 .051 .060 .064	60
70	.057 .023 .65 .051 .077 .122		.045 .023 .4 .043 .067 .076		.044 1	.044 1			.056 .023 .71 .050 .077 .121	70
80	.039 .023 .15 .035 .058 .089			.051 .025 .11 .038 .070 .108		.060 .036 .33 .056 .072 .144			.053 .033 .59 .050 .071 .111	80
90S								.046 .025 .37 .043 .063 .113	.046 .025 .37 .043 .063 .113	90S
15E	60E	105E	150E	165W	120W	75W	30W	15E		
LONGITUDE										

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUTUMN  
FL 310

															MEAN															
90N																			90N											
80																			80											
70																.137 .070 143 .125 .216 290			.114 .066 20 .111 .200 226			.134 .070 163 .124 .208 285								
60																.088 .054 23 .068 .155 208			.240 .025 5 .229 .265 277			.109 .083 22 .061 .237 269			.098 .053 10 .074 .163 194			.110 .076 60 .070 .214 272		
50																.056 .037 8 .044 .073 134			.075 .057 209 .054 .127 238			.117 .082 221 .080 .213 302			.077 .063 308 .060 .106 202			.088 .070 746 .059 .144 268		
40	.075 .032 14 .057 .105 130						.084 .040 62 .070 .122 186			.048 .015 7 .053 .056 069			.052 .037 53 .039 .078 135			.056 .043 222 .044 .085 202			.070 .052 188 .054 .093 252			.061 .053 656 .048 .084 182			.062 .050 1202 .041 .088 200					
30	.066 .029 32 .055 .089 136						.057 .025 151 .053 .075 128			.077 .039 8 .070 .116 131			.043 .022 46 .038 .066 092			.057 .039 273 .049 .083 148						.049 .030 54 .047 .075 143			.056 .033 564 .037 .079 140					
20	.052 .013 14 .049 .068 072			.048 .021 20 .053 .059 095			.038 .020 6 .033 .055 072			.068 .039 5 .055 .095 136			.038 .041 35 .032 .047 136			.047 .018 35 .046 .063 087			.039 .015 26 .036 .054 073						.044 .027 141 .040 .062 093					
10				.049 .021 60 .049 .069 096			.026 .013 9 .029 .040 044			.008 .006 2 .008 .012 014			.021 .014 26 .016 .031 058			.038 .006 2 .038 .042 044									.038 .022 99 .035 .056 093					
0				.063 .084 10 .035 .065 268			.039 1			.013 .010 15 .010 .016 041			.013 .005 6 .015 .016 019			.035 .016 28 .033 .048 071			.035 1						.032 .040 61 .039 .044 076					
10							.062 1			.014 .009 16 .010 .022 035									.067 .014 5 .067 .079 082						.028 .025 22 .014 .065 080					
20							.044 .025 2 .044 .060 067			.038 .039 8 .026 .068 116									.031 .003 2 .031 .033 034						.038 .033 12 .028 .069 112					
30							.073 .029 12 .083 .100 104			.065 .031 9 .070 .084 121									.053 1						.069 .030 22 .049 .100 118					
40	.028 1						.083 .061 218 .065 .105 266			.076 .051 18 .062 .092 215						.022 1			.050 .004 2 .050 .053 054						.082 .060 240 .064 .103 261					
50										.088 .061 13 .078 .104 232			.159 1			.032 1			.186 1						.095 .064 16 .077 .174 229					
60													.124 1			.069 1									.097 .028 2 .097 .115 123					
70	.069 .030 65 .059 .101 138						.061 .030 4 .062 .091 094						.041 1			.135 1									.069 .031 71 .059 .101 138					
80	.051 .032 15 .045 .093 107									.068 .037 11 .060 .088 150						.082 .050 33 .072 .123 208									.072 .046 59 .068 .099 166					
90S																						.058 .030 37 .051 .083 129			.058 .030 37 .051 .083 129					
LONGITUDE																														
15E	60E	105E	150E	165W	120W	75W	30W	15E																						

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUTUMN  
FL 330

												MEAN			LAT
90N															90N
80															80
70															70
60															60
50															50
40															40
30															30
20															20
10															10
0															0
10															10
20															20
30															30
40															40
50															50
60															60
70															70
80															80
90S															90S
15E	60E	105E	150E	165W	120W	75W	30W	15E							
LONGITUDE															

CODE:

MEAN    ST. DEV.

N

50%

84.

98

AUTUMN  
FL 350

FL 350

[illegible]

MEAN	ST. DEV.	N
50%	84%	98%

MEAN	LAT
------	-----

347

CODE:

MEAN	ST. DEV.	N
50°	84°	98°

AUTUMN  
FL 390

[illegible]



CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUTUMN  
FL 430

[illegible]



CODE: MEAN ST. DEV. N  
507 847 987

AUTUMN  
FL 450

	MEAN										LAT
											90N
90N											90N
80											80
70											70
60											60
50											50
40											40
30											30
20											20
10											10
0											0
10											10
20											20
30											30
40											40
50											50
60											60
70											70
80											80
90S											90S
	15E	60E	105E	150E	165W	120W	75W	30W	15E		
	LONGITUDE										

MEAN	LAT
------	-----

[illegible]

CODE:

MEAN ST. DEV. N

50% 84% 98%

AUTUMN  
FL 490

	MEAN								LAT
90N									90N
80									80
70					963 339 142 911 1 191 1 946	987 247 20 886 1 291 1 395		966 329 162 894 1 197 1 885	70
60				914 396 23 848 1 388 1 542				914 396 23 848 1 388 1 542	60
50					596 284 212 556 830 1 338	635 275 166 606 885 1 376	506 210 172 482 665 1 036	579 265 550 499 817 1 333	50
40		.461 .199 62 .433 .660 .931		.468 .302 30 .373 .727 1 226	.321 169 158 273 483 721	.403 .213 120 337 613 .881	.390 191 618 358 576 .869	.387 .199 988 .321 586 876	40
30		.157 .107 120 .137 .222 .462			.227 .157 243 .177 .388 661		.296 117 54 290 422 .533	.216 .146 417 .171 .363 583	30
20	.110 .047 .16 .103 .157 .182				.186 .050 35 105 .158 214	.091 .044 26 .082 .145 .193		.102 .048 77 .092 .152 203	20
10	.120 .060 .50 .113 .169 .261			.067 .046 5 .059 .103 .142				.115 .061 55 109 .167 260	10
0	.136 .069 4 .134 .190 .230				.059 .033 28 050 108 .124			.069 .047 32 .052 .129 .177	0
10			.027 .013 8 .023 .040 .049			.089 .026 5 .077 .109 .135		.051 .036 13 041 .078 .128	10
20						.069 .006 2 .069 .073 .075		.069 .006 2 069 .073 .075	20
30									30
40		.436 .223 201 .394 .639 .971			.268 1			.435 .222 202 393 .638 .970	40
50			.485 .120 8 .479 .585 .682	.459 1	1.045 1	.669 1		.550 .195 11 488 .680 .975	50
60				.983 1	.499 1			.741 .242 2 741 .906 .973	60
70	1.061 .288 65 1.083 1.340 1.697		1.543 .216 4 1.470 1.721 1.876		.697 1	1.556 1		1.108 .308 71 1.093 1.404 1.754	70
80	.942 .147 15 .958 1.066 1.203		1.310 .439 10 1.203 1.628 1.979		1.348 .404 33 1.214 1.718 2.292			1.236 .403 58 1.057 1.660 2.264	80
90S							1.047 .280 37 1.009 1.328 1.683	1.047 .280 37 1.009 1.328 1.683	90S
	15E	60E	105E	150E	165W	120W	75W	30W	15E
LONGITUDE									

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUTUMN  
FL 510

[illegible]

CODE:

MEAN ST. DEV. N

50% 84% 98%

AUTUMN  
FL 530

	MEAN										LAT
											90N
80						1.386 .356 142	1.474 .320 20			1.398 .353 162	80
70						1.359 1.695 2.200	1.394 1.613 2.053			1.347 1.718 2.157	70
60					1.217 .384 23					1.217 .384 23	60
50					1.171 1.694 1.928					1.171 1.694 1.928	50
40						.901 .340 212	.983 .328 166	.782 .262 172		.888 .324 550	40
30						.878 1.202 1.758	.964 1.341 1.675	.734 1.022 1.482		.771 1.188 1.676	30
20											20
10						.503 .243 158	.643 .303 120	.640 .252 616		.623 .288 986	10
0						.456 .746 1.091	.572 .893 1.414	.594 .874 1.271		.541 .869 1.284	0
10						.368 .212 243				.352 .214 417	10
20						.314 .551 .918				.297 .552 .899	20
30						.213 .090 .35	.140 .057 .26			.175 .083 .77	30
40						.212 .285 .409	.125 .212 .238			.164 .241 .338	40
50											50
60											60
70											70
80											80
90S											90S
90N											90N
80											80
70											70
60											60
50											50
40											40
30											30
20											20
10											10
0											0
10											10
20											20
30											30
40											40
50											50
60											60
70											70
80											80
90S											90S
15E	60E	105E	150E	165W	120W	75W	30W	15E			
LONGITUDE											

MEAN

[illegible]

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUTUMN  
FL 570

MEAN										LAT
90N										90N
80										80
70							1.919	.361	142	70
							1.927	2.277	2.589	
60						1.714	.377	23		
						1.721	2.051	2.477		
50							1.361	.405	210	
							1.333	1.734	2.276	
40						1.093	.384	62		
						1.026	1.451	1.983		
30							.498	.213	120	
							.454	.694	1.109	
20										
							.268	.127	16	
10							.214	.404	.523	
							.337	.140	50	
							.305	.490	.581	
0							.324	.104	4	
							.367	.407	.410	
10										
							.310	.102	8	
							.370	.393	.415	
20										
30										
40										
50										
60										
70										
80										
90S										90S
15E	60E	105E	150E	165W	170W	75W	30W	15E		
LONGITUDE										

MEAN	LAT
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[illegible]



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16. Abstract  A climatology of ozone for altitudes from FL190 to FL590 (19 000 to 59 000 ft) is presented. Climatological tables are given in two appendixes: one with 5° latitude resolution on a monthly basis, and one with 10° latitude resolution on a seasonal basis. Data were taken from 11 472 balloon-borne ozonesondes launched at 60 stations from 1963 to 1980 and from over 160 000 observations made by the Global Atmospheric Sampling Program on 4417 commercial airliner flights from 1975 to 1979. Case study and statistical comparisons of results from these two data sets showed that they are compatible and can be combined. Several examples of analyses that can be made by using the tabulated data are given and discussed.					
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